



Environmental Assessment

(24 CFR Part 58)

Project Identification:	The Bellwether at Yorkville
Block/Lot:	Block 1573; p/o Lot 20
Responsible Entity:	City of New York – Department of Housing Preservation and Development (HPD)
Month/Year:	October 2018
NEPA Project #:	18HPD027M

Environmental Assessment

Responsible Entity:
(24 CFR 58.2[a][7])

HPD

Certifying Officer:
(24 CFR 58.2[a][2])

Maria Torres-Springer, Commissioner of HPD

Project Name:

The Bellwether at Yorkville

Project Location:

401 East 92nd Street, Manhattan, NY (Block 1573, p/o Lot 20)

Estimated total project cost: TBD

Grant Recipient:
(24 CFR 58.2[a][5])

Fetner Properties

Recipient Address:

675 Third Avenue, New York, NY 10017

Project Representative:

Hal Fetner, President and CEO

Telephone Number:

(212) 427-9700

Conditions for Approval: (List all mitigation measures adopted by the responsible entity to eliminate or minimize adverse environmental impacts. These conditions must be included in project contracts or other relevant documents as requirements). (24 CFR 58.40[d], 40 CFR 1505.2[c])

Conditions for approval include measures related to hazardous materials and noise, which will be provided as part of the proposed project by the project sponsor, Fetner Properties. All measures will be required through the Development Agreement between the New York City Housing Authority (NYCHA) and the project sponsor, as well as the applicable funding agreements between the project sponsor and HPD and New York City Housing Development Corporation (HDC). The measures are described in further detail below under "Mitigation Measures Recommended." The project sponsor commits to implementing the measures required by this environmental review and will advise HPD, as the Responsible Entity (RE), of any proposed change in scope of the project or any change in environmental conditions in accordance with 24 CFR 58.71(b).

FINDING: (58.40[g])

- ☒ **Finding of No Significant Impact**
(The project will not result in a significant impact on the quality of the human environment)
- ☐ **Finding of Significant Impact**
(The project may significantly affect the quality of the human environment)

Project Sponsor Signature:

Title/Organization:

Hal Fetner, Fetner Properties

Date: 10/12/18

Preparer Signature:

Title/Agency:

Connor Lacefield, AKRF, Inc.

Date: 10/11/18

CEQR Lead Agency Signature:

Title/Agency:

Arden Sokolow, NYCHA Chief of Staff

Date: 11/13/18

RE Certifying Officer Signature:

Title/Agency:

Callista Nazaire,

Director of Environmental Planning, HPD **Date:** 11/13/18

(24 CFR §51.104 [b][2])

Statement of Purpose and Need for the Proposal: (40 CFR 1508.9[b])

NYCHA (the “Applicant”) is seeking the disposition of public housing property in accordance with Section 18 of the United States Housing Act of 1937. The purpose of the proposed disposition is to facilitate the development of an underutilized, approximately 21,000-square-foot (sf) site within NYCHA’s John Haynes Holmes Towers development (the “Holmes Towers Development”) with a new, 50-story building containing 339 dwelling units (DUs), including 169 affordable DUs, and approximately 12,300 gross square feet (gsf) of community facility space (the “Proposed Project”) in the Yorkville neighborhood of Manhattan. The Proposed Project would provide 169 affordable DUs, which would provide economic benefits to the neighborhood and its residents and advance a citywide initiative to build and preserve 300,000 affordable DUs over 10 years to support low- and middle-income New Yorkers. The Proposed Project’s affordable DUs would provide needed housing for households earning up to 60 percent of the area median income (AMI).

In addition, the proposed disposition of the project site would provide revenue to support NYCHA’s mission of maintaining and providing affordable housing. A portion of the revenue from the proposed disposition would be reinvested specifically in the Holmes Towers Development to address needed maintenance and repairs. The Proposed Project would redevelop an underutilized site within the Holmes Towers Development and provide new and improved walkways, playgrounds, and landscaping, which would enliven the streetscape within the Holmes Towers Development and along East 92nd Street.

The Proposed Project will also include community facility space, including recreational space and free or low-cost programming for the surrounding community and job opportunities for NYCHA residents. Fetner Properties (the “Project Sponsor”) intends to work with NYCHA’s Office of Resident Economic Empowerment & Sustainability (REES) to fill certain positions with NYCHA residents.

Description of the Proposal: Include all contemplated actions that logically are either geographically or functionally a composite part of the project, regardless of the source of funding. (24 CFR 58.32, 40 CFR 1508.25)

The project sponsor proposes the new construction of a 50-story, approximately 358,000 gsf mixed-use building containing 339 DUs, including 169 affordable DUs, and approximately 12,300 gsf of community facility space (see **Figure 1**). The project site is approximately 21,000 sf and is located on the north side of East 92nd Street (Block 1573, p/o Lot 20) within the Holmes Towers Development in the Yorkville neighborhood of Manhattan, Community District 8 (see **Figures 2 and 3**).

The Proposed Project would be 50 stories with an overall maximum height of approximately 530 feet above grade. The Proposed Project would have a four-story base (approximately 55 feet tall above grade) along East 92nd Street with a roof terrace for building residents. The northern portion of the building would have a one-story base (approximately 14 feet tall above grade) with a rooftop playing field for the community facility use. See **Figures 4, 5, and 6** for a site plan, sections, and ground-floor plan of the Proposed Project.

The proposed residential uses would include amenities for tenants, including fitness centers, children’s play rooms, and a roof terrace. The building entrance for residential uses would be located along East 92nd Street on the western portion of the project site. The proposed community facility use is expected to be operated by Asphalt Green, a nonprofit organization that operates two fitness centers in Manhattan and provides instructional fitness classes and programs for the community. The proposed community facility use would be located on the cellar, first, and second floors of the Proposed Project and would include a gymnasium and rooftop playing field. The entrance for the community facility use would be located along East 92nd Street on the eastern portion of the project site.

The Proposed Project would also provide for improvements to the existing Holmes Towers Development. These improvements would consist of walkway and landscaping improvements around and between the two (2) existing buildings along with improved seating areas and lighting. The Proposed Project also includes three (3) new and improved play areas in the Holmes Towers Development to replace the existing play areas within the project site. In addition, the proposed disposition of the project site would provide revenue to support NYCHA’s mission of maintaining and providing affordable housing. A portion of the revenue from the proposed disposition would be reinvested in the Holmes Towers development to address needed maintenance and repairs.

As noted above, approximately 50 percent of the Proposed Project’s DUs would be affordable DUs. The Applicant and Project Sponsor anticipate targeting the affordable DUs as follows: 10 percent of the affordable DUs for persons making up to 30 percent of the AMI; 15 percent of the affordable DUs for persons making up to 40 percent of AMI; 15 percent of the affordable DUs for persons making up to 50 percent of AMI; and up to 60 percent of the affordable DUs for persons making 60 percent of AMI.

In addition to disposition approval from HUD, the Proposed Project would potentially utilize financing from City and/or state agencies (HPD, HDC, and/or New York State Homes and Community Renewal [HCR]) for affordable housing construction. Potential HPD funding would be sought through the Extremely Low and Low-Affordability (ELLA) program. The Project Sponsor/NYCHA also intend to seek zoning overrides to waive requirements of the New York City Zoning Resolution related to height and setback, minimum distance between buildings, and open space ratio.

The Project Sponsor is concurrently preparing an Environmental Assessment Statement (EAS) pursuant to New York City's City Environmental Quality Review (CEQR), and a Short Environmental Assessment Form (EAF) pursuant to New York State's State Environmental Quality Review Act (SEQRA) for which NYCHA is serving as the lead agency (CEQR No. 18CHA006M). The actions subject to CEQR are the zoning overrides and financing sought by the Project Sponsor. It is expected that the Proposed Project would be complete and operational by 2021.

Existing Conditions and Trends: Describe the existing conditions of the project site and its surroundings, and trends likely to continue in the absence of the proposed project. (24 CFR 58.40[a])

The project site is located on the north side of East 92nd Street between First and York Avenues on an underutilized portion of the Holmes Towers Development site. The Holmes Towers Development consists of two (2) - 25-story buildings containing a total of 537 DUs and ground-floor community facility uses. The 21,000 sf project site is located in between these two (2) towers. The project site contains landscaping, walkways, and two (2) play areas serving the Holmes Towers Development. The project site is within an R8 zoning district.

Land uses within 400 feet of the project site are predominantly residential and commercial, along with light manufacturing, community facility and/or institutional, and open space uses (see **Figure 7**).

Residential buildings range from five (5)-story multifamily walkup buildings located on midblock sites to larger high-rise multifamily elevator buildings located along York and First Avenues. In addition to the Holmes Towers Development, the Stanley M. Isaacs Houses (three (3) residential towers) is located directly north of the project site. Development surrounding the project site contains residential and community facility uses as well as surface parking, walkways, landscaping, and play areas. There is also a market-rate residential building located on the same block as the Holmes Tower Development at East 92nd Street and York Avenue.

Commercial uses within 400 feet of the project site include ground-floor retail uses along First and York Avenues and individual commercial buildings on East 91st and East 92nd Streets. These ground-floor retail uses include a mix of restaurants, convenience stores, and other neighborhood services. A Courtyard by Marriott Hotel is located directly south of the project site across East 92nd Street.

Community facility and institutional uses within the study area include an American Society for the Prevention of Cruelty to Animals (ASPCA) adoption center directly south of the project site at 424 East 92nd Street, the Gillen Brewer School directly south of the project site in the base of the Courtyard Marriott Hotel, the Association to Benefit Children's Cody Gifford House located south of the project site at 404 East 91st, the Convent of the Sacred Heart School of New York's recently completed Athletics and Wellness Center located at 406 East 91st Street, the Asphalt Green recreation center located southeast of the project site at 555 East 90th Street, and the East Side Middle School (MS 114) located west of the project site at 331 East 91st Street.

Other uses within the study area include parking, light manufacturing, and open space. Parking uses are found on the south sides of East 91st and 92nd Streets. Surface parking uses are provided along East 93rd Street between the Holmes Towers development and the Stanley M. Isaacs Houses. Light manufacturing uses, such as a wholesale bakery, are located on East 91st Street and East 92nd Street. There are two open spaces within the study area: DeKovats Playground, located east of the project site on York Avenue between East 91st and East 92nd Streets; and the East River Esplanade, a portion of which is currently being reconstructed, located along the East River to the east and north of the project site.

Transit serving the project site includes the M31 and M86 buses, which stop in front of the project site on East 92nd Street, and the M15 bus and M15 SBS (Select Bus Service), which run along First Avenue. The project site is located approximately 1,500 feet southeast from the Q train at 96th Street and Second Avenue and approximately 2,000 feet northeast from the Q train at 86th Street and Second Avenue. The No. 6 train also runs underneath Lexington Avenue further to the west.

The Proposed Project is expected to be completed and operational by 2021. Absent the proposed actions, no development is expected on the project site and the project site would remain in its existing condition. There is one (1) planned project within 400 feet of the project site that is expected to be complete by the proposed project's 2021 build year. This planned project is a new 35,790 sf self-storage facility containing storage units and accessory offices at 428 East 92nd Street.

Statutory Checklist

(24CFR §58.5)

For each listed statute, executive order, or regulation, record the determinations made. Note reviews and consultations completed as well as any applicable permits or approvals obtained. Attach evidence that all required actions have been taken. Record any conditions or mitigation measures required. Then, make a determination of compliance or consistency. (See attached instructions.)

Factors	Determinations and Compliance Documentation
Historic Preservation (36 CFR 800)	<p>The New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) reviewed the proposed project in accordance with Section 106 of the National Historic Preservation Act of 1966. In a letter dated January 29, 2018, OPRHP indicated that the project site has no archaeological or architectural significance. No impacts related to historic preservation would result from the proposed project.</p> <p>Tribal consultation has also occurred through the Tribal Historic Preservation Officer (THPO) identified for New York County through HUD's Tribal Directory Assessment Tool (https://egis.hud.gov/tdat/). According to the THPO, consultation is only necessary on sites involving new ground disturbance (i.e. sites not previously disturbed from past construction. Since the project site does not meet this criterion, no further consultation with the THPO is necessary and no impacts would result from the proposed project.</p> <p>Source: OPRHP determination letter dated January 29, 2018, and New York City Landmarks Preservation Commission (LPC) determination letter dated December 21, 2017.</p>
Floodplain Management (24 CFR 55, Executive Order 11988)	<p>The project site is not located within a Special Flood Hazard Area. No impacts would result from the proposed project (FIRM Panel 3604970089F) (see Figure 8).</p> <p>Source: FEMA Flood Map Service Center Locator, February 2018</p>
Wetlands Protection (Executive Order 11990)	<p>The project site is not located within any identified federal wetlands. No impacts would result from the proposed project (see Figure 9).</p> <p>Source: National Wetlands Inventory, February 2018.</p>
Coastal Zone Management Act (Sections 307[c],[d])	<p>The project site is located within the boundaries of New York City's Coastal Zone (see Figure 10). The Proposed Project would be consistent with all applicable policies of the New York City Waterfront Revitalization Program (WRP).</p> <p>The New York City Department of City Planning's (DCP) Waterfront and Open Space Division serves as New York City's Coastal Zone Commission. In correspondence dated August 8, 2018, DCP stated that the project is consistent with the City's WRP. For federally funded activities, the New York State (NYS) Department of State—Division of Coastal Resources is also required to make a consistency determination. In correspondence dated August 2, 2018, the NYS Department of State determined that the Proposed Project meets the NYS Department of State's general consistency concurrence criteria. Therefore, the NYS Department of State has no objection to the use of state and federal funds for the proposed project.</p> <p>In order to accommodate future increases in the 100-year floodplain elevation with projected sea level rise, the proposed project would elevate critical building systems. The emergency generator would be located on the roof of the building. The gas meter room would be located on a mezzanine above the ground floor at a slab elevation of 21.6 feet (approximately 3 feet above the high projection for the 2100 100-year flood elevation [18.25 feet]) and would be expected to continue operating in the event of a flood event. The gas service would provide domestic hot water heating for building. In addition, the proposed project would use electricity for building heating and would protect the electrical switchboard room by locating it on a mezzanine above the ground floor at a slab elevation of 21.6 feet (approximately 3 feet above the high projection for the 2100 100-year flood elevation). The rooftop water tanks would provide domestic water storage until the domestic fill pump could be repaired or replaced (or a temporary pump would be installed). With these measures, the proposed project's electrical utilities, domestic water, heating, and cooling systems would be resilient to future flood conditions.</p> <p>Source: Correspondence from DCP dated August 8, 2018 and NYS Department of State dated August 2, 2018</p>
Sole Source Aquifers (40 CFR 149)	<p>The project site is located in New York County (Manhattan), New York, and is not located above a sole source aquifer. No impacts to sole source aquifers would result from the Proposed Project</p>

Factors	Determinations and Compliance Documentation
Endangered Species Act (50 CFR 402)	The project site is located in a densely populated urban setting in New York County (Manhattan). According to the U.S. Fish and Wildlife Service (USFWS), no federally listed or proposed endangered or threatened species or candidate species are known to exist in New York County. Therefore, the Proposed Project would not result in significant impacts related to endangered species. Source: http://www.fws.gov/northeast/nyfo/es/CoListCurrent.pdf .
Wild and Scenic Rivers Act (Sections 7 [b],[c])	There are no wild and scenic rivers within New York City, as designated by the U.S. Department of the Interior; therefore the Proposed Project would be in compliance with the Wild and Scenic Rivers Act. Source: http://www.rivers.gov/new-york.php .
Air Quality (Clean Air Act, Sections 176 [c] and [d], and 40 CFR 6, 51, 93)	The Proposed Project would not generate significant levels of traffic and emission from heating systems would not have a significant adverse impact on ambient air quality in the surrounding area. Therefore, the Proposed Project is not expected to result in exceedances of the National Ambient Air Quality Standard (NAAQS), nor would it adversely affect the State Implementation Plan (SIP). Based on the conservative assumption of the use of fuel oil No. 2 for heating, the maximum annual emissions would be much lower than the de minimis levels defined in 40 CFR 93.153 for general conformity. Therefore, the Proposed Project would conform with all applicable SIPs and a conformity determination is not required.
Farmland Protection Policy Act (7 CFR 658)	The Proposed Project would not cause disturbance of Prime, Unique, or Statewide Important Farmland and would not result in the conversion of agricultural land to non-agricultural uses. Therefore, the Proposed Project would not violate the Farmland Protection Policy Act.
Environmental Justice (Executive Order 12898)	The Proposed Project would be located in a mixed-income area. It is intended to serve an existing need for affordable housing and would not result in any unmitigated impacts. Therefore, the Proposed Project would not result in a disproportionately high adverse human health impact or environmental effect on minority and low-income populations.

HUD Environmental Standards

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<p>Noise Abatement and Control (24 CFR 51 B)</p>	<p>Existing noise levels at the project site were measured at two locations by AKRF, Inc. on November 15, 2017. Site 1 was located on East 92nd Street between First and York Avenues. Site 2 was located near the entrance of the Proposed Project approximately 100 feet north of East 92nd Street. Based on the Ldn values at the project site, the Proposed Project must provide 30 dBA of window-wall attenuation on the south façade (i.e., along East 92nd Street) and 25 dBA of window-wall attenuation on all other facades of the proposed building. The Proposed Project's design measures are expected to provide sufficient attenuation to satisfy HUD interior noise level requirements. A professional certification from the Proposed Project's Architect of Record dated September 10, 2018 was submitted to HPD for approval prior to submission of NYCHA's Request for Release of Funds to HUD and project closing. The window-wall attenuation measures, including an alternate means of ventilation, would be required through provisions in the Development Agreement between NYCHA and the Project Sponsor, as well as the Project Sponsor's funding agreements with HPD and HDC Source: AKRF, Inc. Noise Assessment, March 2018</p>
<p>Toxic or Hazardous Substances and Radioactive Materials (HUD Notice 9-33)</p>	<p>A <i>Phase I Environmental Site Assessment (ESA)</i> and a <i>Subsurface (Phase II) Investigation Report</i> were prepared by AKRF, Inc. in June 2017 and April 2018, respectively. The Phase I ESA was performed in conformance with ASTM Standard E1527-13, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice." The Phase I ESA identified Recognized Environmental Conditions (RECs) i.e., "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property" based on site reconnaissance, previous uses, and information reported to regulatory agencies for the project site or nearby. Historic automotive, lumber, and coal yard uses at the project site may have affected subsurface conditions. Demolition debris from former on-site structures may be present in the subsurface, and could contain lead-based paint or other regulated materials. Site reconnaissance and/or regulatory records indicated that the west-adjacent property had one in-service 15,000-gallon No. 2 Fuel Oil underground storage tank (UST) and two closed-removed 25,000-gallon No. 2 Fuel Oil USTs. The west-adjacent property is also listed in the New York State Department of Environmental Conservation (NYSDEC) Spills database for closed Spill Nos. 09901814, 9811778 and 9806281. A tank removal report for the west-adjacent property indicated that residual petroleum-impacted material remains in place. Former automotive, manufacturing, and dry cleaning uses were also identified on the project site block and on south- and west-adjacent blocks, and Petroleum Bulk Storage (PBS) and Spills listings were identified in the immediate vicinity of the project site. Documented and undocumented releases from these sites may have affected subsurface conditions at the project site.</p> <p>A Phase II Sampling Protocol (Phase II Work Plan) and Health and Safety Plan (HASP) were prepared based on the findings of the Phase I ESA and submitted to the New York City Department of Environmental Protection (DEP) for review and approval. The Phase II Work Plan was approved by DEP on January 9, 2018. The Subsurface (Phase II) Investigation was conducted in January 2018 and the Subsurface (Phase II) Investigation Report was dated April 2018. The scope of work included: the advancement of nine soil borings with collection and analysis of 18 soil samples; the installation of temporary groundwater wells in four of the borings with collection of a groundwater sample from each; the collection of one groundwater sample from the existing groundwater monitoring well; and, the installation of five probes with collection of a soil vapor sample from each. The Phase II results indicated the following:</p> <ul style="list-style-type: none"> Subsurface materials consisted of historic fill material (dark brown sand, silt, brick, gravel, glass, and cinders, with occasional pieces of ceramic and concrete, and coal fragments) from the surface down approximately 6.5 feet below grade. The fill material was generally underlain by apparent native brown sand and silt with a minor gravel component, beneath which was apparent weathered bedrock starting at approximately 5 to 15 feet below grade. In addition, a natural peat layer was encountered at depths of 12 feet

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	<p>bgs and 18 feet bgs in two soil borings. The water table was encountered at between approximately 10 and 11.5 feet below grade.</p> <ul style="list-style-type: none"> • No visual or olfactory evidence of contamination was noted in any of the borings. Photoionization detector (PID) readings, indicating the presence of volatile organic compounds (VOCs) were non-detectable, except where (presumably natural) peat was encountered. • Soil samples exhibited slightly elevated levels of VOCs, semivolatile organic compounds (SVOCs), pesticides, and metals above the applicable NYSDEC Soil Cleanup Objectives. The compounds detected are commonly found in fill material in New York City. At the reported concentrations, they are not indicative of an on-site spill or release. • The VOC methyl tertiary butyl ether (MTBE), a historical unleaded gasoline additive, was detected in one groundwater sample above the NYSDEC Class GA Ambient Water Quality Standards (AWQSS). The MTBE is likely related to a historical gasoline release (off-site as the project site's gasoline storage seemingly ended before MTBE was used). Elevated SVOC concentrations in the groundwater samples are likely attributable to the sediment in groundwater and not to a discharge or on-site source of contamination. Unfiltered and filtered analyses for metals exhibited exceedances of the AWQSS; however, the detected levels are typical of New York City and may be attributed to sediment within the groundwater samples. • Concentrations of VOCs detected in the soil vapor samples were compared to the New York State Department of Health (NYSDOH) 2006 Guidance for Evaluating Soil Vapor Intrusion/air guidance values (AGVs), the updated May 2017 NYSDOH Soil Vapor/Indoor Air Decision Matrices, the September 2013 NYSDOH Fact Sheet Update for Tetrachloroethene (PCE), and the August 2015 NYSDOH Fact Sheet Update for Trichloroethene (TCE). These values provide an extremely conservative means of comparison. As the AGVs are intended to be protective of indoor air, the comparison assumes that any soil vapor detected would completely penetrate into the building, a condition that would not be expected to actually occur. VOCs were detected in soil vapor, but only one, TCE, exceeded an indoor air AGV. As noted, that AGV is meant to apply to indoor air, not sub slab vapor, and because there is no building on the site, the AGV is overly conservative for determining the risk of vapor intrusion. The NYSDOH Matrix Values do apply to the risk of soil vapor intrusion. The 7.95 ug/m3 TCE concentration is on the extremely low end of sub-slab vapor values that NYSDOH's matrix evaluates for mitigation, monitoring or no further action. TCE concentrations between 6 ug/m3 and 59 ug/m3 require "no further action" if indoor air sampling shows that air inside of a building is relatively unimpacted by subslab vapor intrusion. Again, because there is no indoor air to sample here, the matrix cannot be fully applied. However, given the very low value of TCE detected, within 3 parts per billion of the lowest end the Matrix sets for any type of action (even just monitoring), the NYSDOH Matrix would likely require "no further action" if a structure was present on the site. <p>The Proposed Project would entail construction of a new building requiring excavation and soil disturbance for foundations, utilities, etc. Although this could increase pathways for human exposure to any contaminated materials present in the subsurface, impacts would be avoided by incorporating the following into the Proposed Project:</p> <ul style="list-style-type: none"> • Based on the results of the Phase II, a Remedial Action Plan (RAP) and a Construction Health and Safety Plan (CHASP) have been prepared for DEP review. DEP approved the RAP and CHASP in a May 31, 2018 letter, and these plans would be implemented during the subsurface disturbance associated with implementing the Proposed Project. The purpose of a RAP and CHASP is to address any subsurface contamination identified by the Phase II and any contingencies that may arise during construction, such as specifying appropriate measures to be implemented if USTs, soil, or
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	<p>groundwater contamination, or other unforeseen environmental conditions are encountered. The RAP would also include any necessary measures that need to be incorporated into the new construction, e.g. waterproofing (the proposed building cellar is anticipated to extend to approximately 15.5 feet below grade and one elevator pit to approximately 25.5 feet below grade, while groundwater is anticipated to be encountered at 10 feet below grade).</p> <ul style="list-style-type: none"> • Applicable regulatory requirements would also be followed at the project site, e.g., disposing of any excess soil off-site at appropriately licensed facilities; reporting to NYSDEC any signs of a petroleum spill (and removing and registering encountered tanks); and following DEP requirements during dewatering. <p>Construction in accordance with the DEP-approved RAP/CHASP and completion of a Professional Engineer-certified Remedial Closure Report at the conclusion of construction (for DEP approval) would be required through the Development Agreement between NYCHA and the Project Sponsor, as well as the Project Sponsor's applicable funding agreements with HPD and HDC. The Development Agreement will require compliance with the RAP/CHASP. The Project Sponsor submitted an application to NYSDEC in June 2018 to investigate and remediate the building footprint portion of the project site under the New York State Brownfield Cleanup Program (BCP). As part of the BCP (a voluntary program), all remedial activities within the proposed building footprint would fall under the requirements of a NYSDEC-approved Remedial Action Work Plan (RAWP) approved through issuance of a Decision Document, and all other applicable NYSDEC requirements. This would include similar procedures and measures as the DEP RAP/CHASP. Work outside of the proposed building footprint would be conducted under the DEP RAP. Absent enrollment in the BCP, the local approvals obtained through DEP would apply during soil excavation and disturbance activities conducted throughout the project site, and would be required through the Development Agreement between NYCHA and the Project Sponsor as well as the Project Sponsor's applicable funding agreements with HPD and HDC.</p> <p>Lastly, according to the United States Environmental Protection Agency's (EPA) map of Radon Zones, New York County is considered to have low potential for elevated indoor radon levels (the predicted average indoor radon screening level is less than 2 picocuries per liter). Therefore, radon exposure is not anticipated. Source: Phase I ESA prepared by AKRF, Inc., June 2017; Phase II Subsurface Sampling Protocol prepared by AKRF, Inc., December 2017 https://www.epa.gov/radon/epa-map-radon-zones</p>
<p>Siting of HUD-Assisted Projects near Hazardous Operations (24 CFR 51 C)</p>	<p>A June 2017 Phase I ESA was prepared by AKRF, Inc. According to the Phase I ESA, 42 PBS facilities were identified within a 1/8-mile radius of the project site. A visual survey of the surrounding area and a review of the database reports and aerial photographs revealed that there are no exterior aboveground storage tanks (ASTs) with a direct line of sight to the proposed project. The ASTs are located within existing buildings which serve as barriers and are very likely located below-grade in building basements. Additionally, the exterior ASTs of explosives or hazardous materials within New York City is subject to New York City Fire Department (FDNY) permitting which requires appropriate blast and thermal protection materials around the storage tank to protect adjacent properties. No impacts would result from the Proposed Project. Source: Phase I ESA prepared by AKRF, Inc., June 2017</p>
<p>Airport Clear Zones and Accident Potential Zones (24 CFR 51 D)</p>	<p>The project site is not located within 2,500 feet of the end of a civil airport runway or 15,000 feet of the end of a military airfield runway. Therefore, no further assessment is warranted and no impacts would result.</p>

Environmental Assessment Checklist

(Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27)

Evaluate the significance of the effects of the proposal on the character, features, and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a finding of impact. **Impact Codes:** (1) No impact anticipated; (2) Potentially beneficial; (3) Potentially adverse; (4) Requires mitigation; (5) Requires project modification. Note names, dates of contact, telephone numbers, and page references. Attach additional materials as needed.

Land Development	Code	Source or Documentation
Conformance with Comprehensive Plans and Zoning	1	<p>The Proposed Project would require mayoral overrides of requirements of the New York City Zoning Resolution related to height and setback, minimum distance between buildings, and open space ratio. These zoning overrides would only affect the project site. The Proposed Project would not affect zoning in the surrounding area, and would be consistent with the predominantly residential and commercial zoning districts that currently existing in the area.</p> <p>The Proposed Project would not result in adverse land use effects on adjoining uses or be incompatible with uses in the study area. The Proposed Project's residential and community facility uses would be consistent with land uses in the study area, which contains predominantly residential and retail uses. Therefore, the Proposed Project would not result in impacts to land use and zoning.</p> <p>Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i>.</p>
Compatibility and Urban Impact	2	<p>The Proposed Project would introduce walkway and landscaping improvements within the Holmes Towers Development, including new play areas to replace the existing play areas within the project site. The Proposed Project would have a positive effect on land use by activating underutilized space within the Holmes Towers Development.</p> <p>The Proposed Project would have a maximum overall height of approximately 530 feet. The Proposed Project would be taller than the adjacent NYCHA structures; however, there are other tower developments in the surrounding area, particularly along York Avenue and First Avenue. The proposed building would be built to the lot line along East 92nd Street and would rise four stories (approximately 55 feet) along East 92nd Street before setting back. This would create a new streetwall along East 92nd Street, which would be expected to enhance the pedestrian experience along adjacent sidewalks. Therefore, the Proposed Project would not result in any impact to urban design.</p> <p>Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i>.</p>
Slope	1	<p>The surface topography at the project site is relatively level and suitable for redevelopment. Based on survey data, the project site is approximately 14 feet above the North American Vertical Datum of 1988 (an approximation of mean sea level). The Proposed Project would not alter the slope of the surrounding area. No impacts would result.</p> <p>Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; True North Surveyors, P.C., Proposed Subdivision Survey of Holmes Towers Block 1573 Lot 20, February 26, 2018.</p>
Erosion	1	<p>Owing to the level topography of the project site, the potential for migration of sediment offsite and any runoff-related impacts to water quality is very low. Erosion control measures would be implemented during construction as required by the New York City Building Code, the General State Pollutant Discharge Elimination System (SPDES) Permit for Construction Activities (GP-0-15-002), and the New York State Standards and Specifications for Erosion and Sediment Control. No impacts related to erosion would occur.</p>
Soil Suitability	1	<p>The soils at the project site are classified as "urban land" and are suitable for redevelopment. These soils do not constitute a valuable resource, for agricultural or construction materials, nor do they support</p>

Land Development	Code	Source or Documentation
		<p>an existing ecological resource, such as hydric soils sustaining a wetland. Therefore, the necessary disturbance to the onsite soils to build the foundation for the Proposed Project would not disturb a valuable soil resource.</p> <p>Source: Natural Resource Conservation Service Web Soil Survey, U.S. Department of Agriculture.</p>
Hazards and Nuisances including Site Safety	4	<p>The Proposed Project would not result in hazards and nuisances. The effects associated with construction of the proposed project would be addressed under existing local, state, and federal regulations governing construction activities within New York City. In addition, construction of the Proposed Project would occur in accordance with a DEP-approved CHASP which would be required through provisions in the Development Agreement between NYCHA and the Project Sponsor, as well as the applicable funding agreements between the Project Sponsor and HPD and HDC.</p>
Energy Consumption	1	<p>The Proposed Project would result in insignificant increases in energy consumption. It would be served by existing utilities and would meet both New York State and New York City energy requirements.</p> <p>Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i>.</p>
Noise Contribution to Community Noise Levels	1	<p>The Proposed Project would not contribute to community noise levels as it would not result in significant levels of traffic (mobile source noise). No mobile or stationary noise impacts are anticipated as the proposed project's building mechanical system (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) to avoid producing levels that would result in any significant increase in ambient noise levels.</p> <p>New York City regulations related to construction noise are set forth in section 1043 of the City Charter and section 24-219 of the Administrative Code of the City of New York. The New York City Noise Code was enacted in 2007 and mandates that all construction be conducted in accordance with noise mitigation plans that address the specific location, type of work, and timing of a project. Contractors must develop a noise mitigation plan prior to the start of work. Every construction site must have a noise mitigation plan on location. When construction activity is planned near locations such as schools, hospitals, and houses of worship, the construction contractor is expected to design their noise mitigation plan to be sensitive to its neighbors. The Code also sets standards for noise levels created by handling containers and construction material on public streets, and ways to lessen the noise from each type of construction equipment. For most types of construction, including multifamily residential buildings, construction activity is typically restricted to weekdays between 7 AM–6 PM. Work may take place after hours and on weekends only with express authorization from the New York City Departments of Buildings (DOB) and the New York City Department of Transportation (DOT). A noise mitigation plan must be in place before any authorization is granted. In addition, emergency work necessary for public safety, or work that cannot be performed during normal work hours, may occur after hours or on weekends. For example, water main or gas line repairs may require construction activity outside the normal hours of construction.</p> <p>Construction of the proposed project would be expected to result in elevated noise levels at nearby receptors and noise due to construction would at times be noticeable and potentially intrusive. However, the noise levels would not rise to the level of a significant adverse noise impact at any analyzed receptors. In addition, the project sponsor has committed to additional noise control measures beyond the minimum</p>

Land Development	Code	Source or Documentation
		<p>required by code in order to reduce potential noise effects on the surrounding receptors.</p> <p>Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; New York City Charter Section 1043; and Administrative Code of the City of New York Section 24-219</p>
Air Quality Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels	1	<p>The Proposed Project would result in very low vehicular trip increments, which would result in de minimis increases in pollutants and would not result in significant adverse impacts near roadways.</p> <p>The Proposed Project would utilize electric systems or natural gas to fuel the building's heat and hot water systems. Emissions would not result in significant adverse impacts to nearby sensitive receptors. In addition, there are only light manufacturing uses within 400 feet of the project site. Emissions from these facilities would not have the potential to affect residents in the proposed building.</p> <p>Within a 1,000-foot study area boundary, sources permitted under the NYSDEC's Title V and state facility permits programs were considered. One facility with a state facility permit was identified: the New York City Department of Sanitation (DSNY) East 91st Street Marine Transfer Station, located at on the East River approximately 500 feet east of the project site. The facility, currently under construction, will be used by the City of New York to implement the Long Term Export Program for the containerization and transport of managed waste from the City by barge and/or rail. The facility has emissions from exempt combustion sources and trial activities and is capping its nitrogen oxides (NO_x) emissions to less than 22.5 tons per 12-month rolling period.</p> <p>The existing study of the East 91st Street Marine Transfer Station, prepared for the CEQR Final Environmental Impact Statement (FEIS) and updated in a Technical Memorandum evaluated the potential air quality implications of the facility's operations in detail. The analysis considered all criteria pollutants, road dust, hazardous air pollutants, and odors. The study evaluated potential impacts at locations surrounding the facility, including ground-level receptors in publicly accessible open spaces and elevated receptors in residential buildings including buildings that are taller than the facilities rooftop vents and are located between the facility and the proposed project. These worst-case concentrations and concentration increments would be higher than concentrations that would occur further downwind at the proposed project building façades and rooftop open spaces. The conclusion of the Technical Memorandum was that there would be no significant adverse air quality impacts associated with the marine transfer station, and therefore, the marine transfer station would not have a significant adverse impact on air quality at the project site.</p> <p>During construction, construction equipment and vehicles have the potential to affect air quality. Based on the duration and intensity of construction activities, the location of nearby sensitive receptors, and implementation of the emissions reduction program for the proposed project, construction of the proposed project would not result in any significant adverse construction air quality impacts.</p> <p>Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018</p>
Environmental Design Visual Quality – Coherence, Diversity, Compatible Use, and Scale	1	<p>The Proposed Project would be compatible with the land use and urban design characteristics of the surrounding area. The Proposed Project would redevelop an underutilized portion of NYCHA property with new affordable housing. The Proposed Project would not result in impacts associated with urban design, visual resources, or neighborhood character. The Proposed Project would have a positive effect on land use by activating underutilized space in the Holmes Towers development.</p> <p>Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i>.</p>

Socioeconomic	Code	Source or Documentation
Demographic Character Changes	1	The Proposed Project would not result in impacts on the demographic character of the area. The Proposed Project would provide market-rate and affordable housing in the Yorkville neighborhood of Manhattan. It would result in a benefit to the surrounding population by providing safe, affordable housing for low- and moderate-income individuals and/or families.
Displacement	1	The Proposed Project would not displace any businesses or residents.
Employment and Income Patterns	1	The Proposed Project would result in additional jobs associated with construction of the building. Once constructed, the buildings would require maintenance personnel and employees for the community facility space. The Proposed Project would not result in a demographic change or a substantial effect on employment and income patterns given that the surrounding area is a mixed income community consistent with the Proposed Project.

Community Facilities and Services	Code	Source or Documentation
Educational Facilities	1	The Proposed Project's 339 DUs would be more than the minimum number of DUs that trigger an analysis of elementary and intermediate public schools (310 DUs). The Proposed Project would not trigger an analysis of public high schools (2,492 DUs). An analysis of elementary and intermediate schools was conducted and concluded the Proposed Project would not result in significant adverse impacts. Therefore, the Proposed Project would not result in impacts to public school facilities. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
Commercial Facilities	1	The Proposed Project would not result in any impacts to existing commercial establishments. Commercial establishments are located in the vicinity of the project site along First and York Avenues. It is expected that some project residents may frequent retail establishments in the neighborhood.
Health Care	1	The Proposed Project would not introduce a sizeable new population to the neighborhood, or displace or alter a hospital or public health clinic, and therefore, the Proposed Project would not result in a significant adverse impact on publicly funded health-care services. According to the <i>CEQR Technical Manual</i> , an assessment of health-care facilities is typically conducted if the proposed action would create a sizeable new neighborhood where none existed before. The Proposed Project would not meet the threshold for analysis of health-care facilities, and therefore, no significant impacts would be expected to occur. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
Social Services	1	The Proposed Project would not directly affect a social services facility, nor would it introduce a substantial new population that would increase demand for social services. Social services are provided in the neighborhood and throughout Manhattan by a range of non-profit organizations and New York City and State agencies and the provision of such services would not be affected by the Proposed Project. Therefore, the Proposed Project would not result in significant impacts on social services.
Solid Waste	1	Solid waste generated by the Proposed Project would be handled by the DSNY. There would be no significant adverse impacts on solid waste and sanitation services. The additional solid waste generated by the proposed project would be negligible. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
Waste Water	1	Waste water would be handled by DEP. According to the <i>CEQR Technical Manual</i> , projects in areas of Manhattan with combined sewer systems may have the potential for significant adverse impacts on

**Community Facilities
and Services**

	Code	Source or Documentation
		waste water conveyance and treatment if they introduce 1,000 or more DUs or 250,000 sf or more of commercial, public facility, and institution and/or community facility space. The Proposed Project is located in a combined sewer area of Manhattan and would not exceed these development thresholds. The increases due to the Proposed Project would be minimal and would not impact the existing waste water treatment and conveyance infrastructure. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
Stormwater	1	New York City's stormwater management system is handled by DEP. The Proposed Project would meet the requirements of DEP's site connection approval process, which addresses stormwater management and requires implementation of best management practices to bring the building into compliance with the DEP's required stormwater release rate. Therefore, the Proposed Project would not result in impacts related to stormwater conveyance and treatment. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
Water Supply	1	New York City's potable water supply is provided by DEP. According to the <i>CEQR Technical Manual</i> , a preliminary analysis of water supply is warranted for projects that would result in exceptionally large demand for water (e.g., more than 1 million gallons per day) or would be located in an area that experiences low water pressure (e.g., areas at the end of the water supply distribution system such as the Rockaway Peninsula and Coney Island). The Proposed Project would not result in an exceptionally large demand for water, nor is it located in an area that experiences low water pressure. Therefore, no further analysis is warranted and the Proposed Project would not result in impacts to water supply. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
Public Safety - Police	1	There would be no impact on police services due to the Proposed Project. Police protection services are provided by the New York City Police Department (NYPD). The closest NYPD facility to the project site is the 23rd Precinct House, located at 162 East 102nd Street in Manhattan. The Proposed Project would not introduce a sizeable new population to the neighborhood, or displace or alter a police station. Therefore, the Proposed Project would have no impact on police protection services. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
- Fire	1	There would be no impact on fire services due to the Proposed Project. Fire protection services are provided by the FDNY. The closest FDNY facility to the project site is the Battalion 10 Engine 22 Ladder 13 station house, located at 159 East 85th Street in Manhattan. The Proposed Project would not introduce a sizeable new population to the neighborhood, or displace or alter a fire station; therefore, the Proposed Project would have no impact on fire protection services. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
- Emergency Medical	1	Based on the expected number of residents, the Proposed Project would not place a significant demand on emergency medical facilities. According to the <i>CEQR Technical Manual</i> , an assessment of health-care facilities is typically conducted if the Proposed Project would create a sizeable new neighborhood where none existed before. The Proposed Project would not meet the threshold for analysis of health-care facilities, and therefore, no impacts would be expected to occur, and a detailed analysis of hospitals and public health-care facilities is not required. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .

**Community Facilities
and Services**

	Code	Source or Documentation
Open Space and Recreation - Open Space	1	The number of projected residents resulting from the Proposed Project would not result in quantitative or qualitative impacts to open spaces or significantly increase the demand for recreational facilities in the neighborhood. There are several open space resources in the surrounding area that would be available to residents of the Proposed Project. The Proposed Project would also add recreation space including amenities for tenants and NYCHA residents, including fitness centers, children's play rooms, and a roof terrace, and would provide recreational space in the proposed community facility. No significant impacts on open space would occur as a result of the Proposed Project. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
- Recreation	1	The number of projected residents resulting from the Proposed Project would not result in impacts to recreation. Nearby parks, including Carl Schurz Park, provide recreational amenities including playgrounds, basketball courts, soccer fields, landscaped areas, and other features. In addition, the Proposed Project would recreational amenities within the building. No significant impacts would occur. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .
- Cultural Facilities	1	The Proposed Project would not place a significant demand on cultural facilities in the area. The project sites are located within New York City, which is home to ample cultural facilities accessible to residents by public transportation.
Transportation	1	The project site is well-served by public transit. Transit serving the project site includes the M31 and M86 buses, which stop in front of the project site on East 92nd Street, and the M15 bus and M15 SBS (Select Bus Service), which run along First Avenue. The project site is located approximately 1,500 feet southeast from the Q train at 96th Street and Second Avenue and approximately 2,000 feet northeast from the Q train at 86th Street and Second Avenue. The No. 6 train is also located underneath Lexington Avenue further to the west. The Proposed Project would increase vehicular traffic, pedestrian volumes, and transit demand compared to existing conditions, but it is not expected to result in impacts to transportation services. A travel demand analysis was conducted, which determined the Proposed Project would generate fewer than 50 additional vehicular trips during the weekday AM, midday, and PM peak hours, and therefore would not result in significant adverse traffic impacts. The Proposed Project would not generate more than 200 peak-hour subway or bus trips, and therefore would not result in significant adverse transit impacts. The Proposed Project would also not result in more than 200 peak-hour pedestrian trips at any particular pedestrian element, and therefore would not result in significant adverse pedestrian impacts. The Proposed Project also would not result in 50 additional vehicular trips at any intersection, 200 peak-hour subway or bus trips, or 200 peak-hour pedestrian trips at any particular pedestrian element during peak construction activities, and therefore would not result in significant adverse transportation impacts during construction. Source: AKRF, Inc., CEQR Environmental Assessment Statement, 2018; <i>CEQR Technical Manual</i> .

Natural Features	Code	Source or Documentation
Water Resources	1	The Proposed Project would not result in a significant effect on water resources, including groundwater. No impacts would occur.
Surface Water	1	The Proposed Project would not result in a significant effect on water resources, including groundwater and/or surface water. No impacts would occur.
Unique Natural Features and Agricultural Lands	1	The project site is located within a densely developed area of Manhattan. There are no unique natural features or agricultural lands near the project site. No impacts would occur.
Vegetation and Wildlife	1	The Proposed Project is located in a densely developed, urban area in New York County (Manhattan), New York. No federally listed or proposed endangered or threatened species or candidate species under USFWS jurisdiction are known to exist in New York County. The Proposed Project would require removal of approximately 17 existing mature London plane trees. This tree loss would be unavoidable but would be offset with the provision of new landscaping as part of the Proposed Project, including approximately 40 new trees. The Proposed Project would not result in impacts related to vegetation, wildlife or endangered species. Source: http://www.fws.gov/northeast/nyfo/es/CoListCurrent.pdf

Other Factors	Code	Source or Documentation

Note: The Responsible Entity must additionally document compliance with 24 CFR §58.6 in the ERR, particularly with the Flood Insurance requirements of the Flood Disaster Protection Act and the Buyer Disclosure requirements of the HUD Airport Runway Clear Zone/Clear Zone regulation at 24 CFR 51 Subpart D.

Summary of Findings and Conclusions

The Proposed Project would redevelop an underutilized site within the Holmes Towers Development with a new building containing residential and community facility uses. The Proposed Project would help address a continuing need for affordable housing in Manhattan and in New York City, particularly in a mixed-income neighborhood such as Yorkville. The proposed community facility space would enhance the neighborhood by providing recreational space, free or low-cost programming for the surrounding community, and job opportunities for NYCHA residents. As shown above, the Proposed Project would not adversely affect the character, features, and resources of the surrounding area and would not result in a significant impact on the quality of the human environment. Measures related to noise attenuation and hazardous materials would be implemented as part of the Proposed Project and required through the Development Agreement between NYCHA and the Project Sponsor and applicable funding agreements between the Project Sponsor and HPD and HDC.

Alternatives to the Proposed Action

Alternatives and Project Modifications Considered (24 CFR 58.40[e], Ref. 40 CFR1508.9)

(Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

The No Action Alternative described below was considered.

No Action Alternative (24 CFR 58.40[e])

(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).

Without the Proposed Project, the Holmes Towers Development is likely to remain in its current condition, and an opportunity to provide needed affordable housing and community facility space in the neighborhood would be lost. The No Action Alternative also would not provide revenue to support NYCHA's mission of maintaining and providing affordable housing and to address maintenance and repairs at Holmes Towers, nor would it provide recreational space and programming for the community, job opportunities for NYCHA residents, or walkway and landscaping improvements and new play areas in Holmes Towers.

Mitigation Measures Recommended (24 CFR 58.40[d], 40 CFR 1508.20)

(Recommend feasible ways in which the proposal or external factors relating to the proposal should be modified in order to eliminate or minimize adverse environmental impacts.)

The Proposed Project requires measures related to hazardous materials contamination and window-wall attenuation, which would be provided as part of the Proposed Project by the Project Sponsor. All measures would be required through the Development Agreement between NYCHA and the Project Sponsor, as well the applicable funding agreements between the Project Sponsor and HPD and HDC. The Project Sponsor commits to implementing the measures required by this environmental review and will advise HPD, as the RE for the Proposed Project's federal environmental review, of any proposed change in scope of the Proposed Project or any change in environmental conditions in accordance with 24 CFR 58.71(b).

Hazardous Materials/Site Contamination

All construction activity on the project site will be performed in accordance with the provisions of the RAP and CHASP approved by DEP on May 31, 2018. Upon completion of the Proposed Project, a Professional Engineer-certified Remedial Closure Report would be provided to NYCHA, HPD, and DEP documenting compliance with the RAP/CHASP requirements. Construction in accordance with the DEP-approved RAP/CHASP and completion of a Remedial Closure Report would be required through the Development Agreement between NYCHA and the Project Sponsor, as well as the Project Sponsor's applicable funding agreements with HPD and HDC.

The Project Sponsor submitted an application to NYSDEC in June 2018 to investigate and remediate the building footprint portion of the project site under the BCP overseen by NYSDEC. In the event the Proposed Project enrolls in the BCP (a voluntary program), all remedial activities would fall under the requirements of a NYSDEC-approved RAWP approved through issuance of a Decision Document, and all other applicable NYSDEC requirements. This would include similar procedures and measures as the DEP RAP/CHASP. Absent enrollment in the BCP, the local approvals obtained through DEP would apply and would be required through the Development Agreement between NYCHA and the Project Sponsor as well as the Project Sponsor's applicable funding agreements with HPD and HDC.

Noise

AKRF, Inc. calculated the day-night average noise levels (L_{dn}) using guidance contained in HUD's Noise Guidebook. The maximum calculated L_{dn} value at the project site is 70.4 dBA, which places the project site in the "normally unacceptable" category. Based upon the L_{dn} values determined for the project site, the Proposed Project must provide 30 dBA of window-wall attenuation on the south façade (i.e., along East 92nd Street) and 25 dBA of window-wall attenuation on all other facades of the proposed building. The Proposed Project's design measures are expected to provide sufficient attenuation to satisfy HUD interior noise level requirements. A professional certification from the Proposed Project's Architect of Record dated September 10, 2018 was submitted to HPD for approval prior to submission to HUD of the Request for Release of Funds. Window-wall attenuation (including an alternate means of ventilation) would be required through provisions in the Development Agreement between NYCHA and the Project Sponsor. Construction in accordance with these commitments and approvals would be required through provisions in the Development Agreement between NYCHA and the Project Sponsor, as well as the applicable funding agreements between the Project Sponsor and HPD and HDC.

Additional Studies Performed

The following documents are attached:

- CEQR Environmental Assessment Statement prepared by AKRF, Inc., CEQR No. 18CHA006M, October 2018
- SEQRA EAF prepared by AKRF, Inc., October 2018
- Phase I Environmental Site Assessment prepared by AKRF, Inc. in June 2017
- Phase II Subsurface Investigation prepared by AKRF, Inc. in April 2018
- LPC Correspondence
- SHPO Correspondence

List of Sources, Agencies, and Persons Consulted (40 CFR 1508.9[b])

- *CEQR Technical Manual*
- AKRF, Inc., CEQR Environmental Assessment Statement, 2018;
- USFWS Federally Listed Endangered and Threatened Species and Candidate Species in New York (by County) (<http://www.fws.gov/northeast/nyfo/es/CoListCurrent.pdf>)
- Federal National Wetlands Inventory
- New York City Zoning Map
- United States Federal Emergency Management Agency – Preliminary Flood Insurance Rate Map
- New York City Coastal Zone Boundary Maps
- Natural Resources Conservation Service Web Soil Survey, United States Department of Agriculture (<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>)
- True North Surveyors, P.C., Proposed Subdivision Survey of Holmes Towers Block 1573 Lot 20, February 26, 2018.

Other Requirements (Section 58.6) Checklist

PROJECT NAME: Bellwether at Yorkville

In addition to the duties under the laws and authorities specified in 58.5 for assumption by RE's under the laws cited in 58.1(b), RE's must comply with the following requirements. Applicability of the following requirements does not trigger the certification and release of funds procedure under this Part or preclude exemption of an activity under 58.34 (a) (12) and/or the applicability of 58.35(b). However, the RE remains responsible for addressing the following requirements in its ERR and meeting these requirements, where applicable, regardless of whether the activity is exempt under 58.34 or Categorically Excluded under 58.35 (a) or (b).

(a) Federal Flood Insurance Purchase Requirements (do not apply to funds from federal formula grants made to a state).

(1) Does the project involve acquisition or construction (including rehabilitation) in a community identified by the Federal Emergency Management Agency (FEMA) as having special flood hazard areas (100-year and 500-year floodplains)?

Yes ☒ No ☐ If "Yes," go to (a)(2). If "No," go to Question (b).

(2) Is the project located in 100-year floodplain (500-year floodplain for "critical" actions*)?

Yes ☐ No ☒ If "Yes," go to (a) (3). If "No," go to Question (b).

(3) Is the community in which the project is located () participating in the National Flood Insurance Program or, () has less than a year passed since FEMA notified the community concerning such hazards. (Please check one of the above depending on the situation) Yes ☐ No ☐
If "Yes," attach a statement concerning how you will assure that flood insurance will be maintained in accordance with the "Flood Insurance Protection" guidance sheet attached to this Checklist and go to Question (b). The implementation of this project consistent with your statement must be made a condition on the environmental findings and recommendations for the project. If "No," project cannot be funded.

*As defined in the U.S. Water Resources Council's Floodplain Management Guidelines for Implementing Executive Order 11988.

(b) Coastal Barriers Resources

Is the project to be undertaken located in the coastal Barrier Resources System, as amended by the Coastal Barrier Improvement Act of 1990 (16 U.S.C. 3501)?

Yes ☐ No ☒ If "Yes," federal financial assistance may not be provided. If "No," then go to Question (c).

(c) Projects located in Close Proximity to Airports Contained on the HUD list of 24 CFR Part 51D Covered Airports.

Does the project involve assistance, subsidy, or insurance for the purchase or sale of an existing property in a Runway Clear Zone or Clear Zone as defined in 24 CFR Part 51D? Yes ☐ No ☒ If "Yes," the buyer must be advised that the property is in a runway Clear Zone or Clear Zone, what the implications of such a location are, and then there is a possibility that the property may, at a later date, be acquired by the airport operator. The buyer must sign a statement acknowledging receipt of this information. The implementation of this requirement must be made a condition in the environmental review findings and recommendations for this project.

Prepared by: Connor Lacefield, AKRF, Inc.

Signature: 

Date: October 11, 2018



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Project
Illustrative View from
East 92nd Street and York Avenue

Figure 1

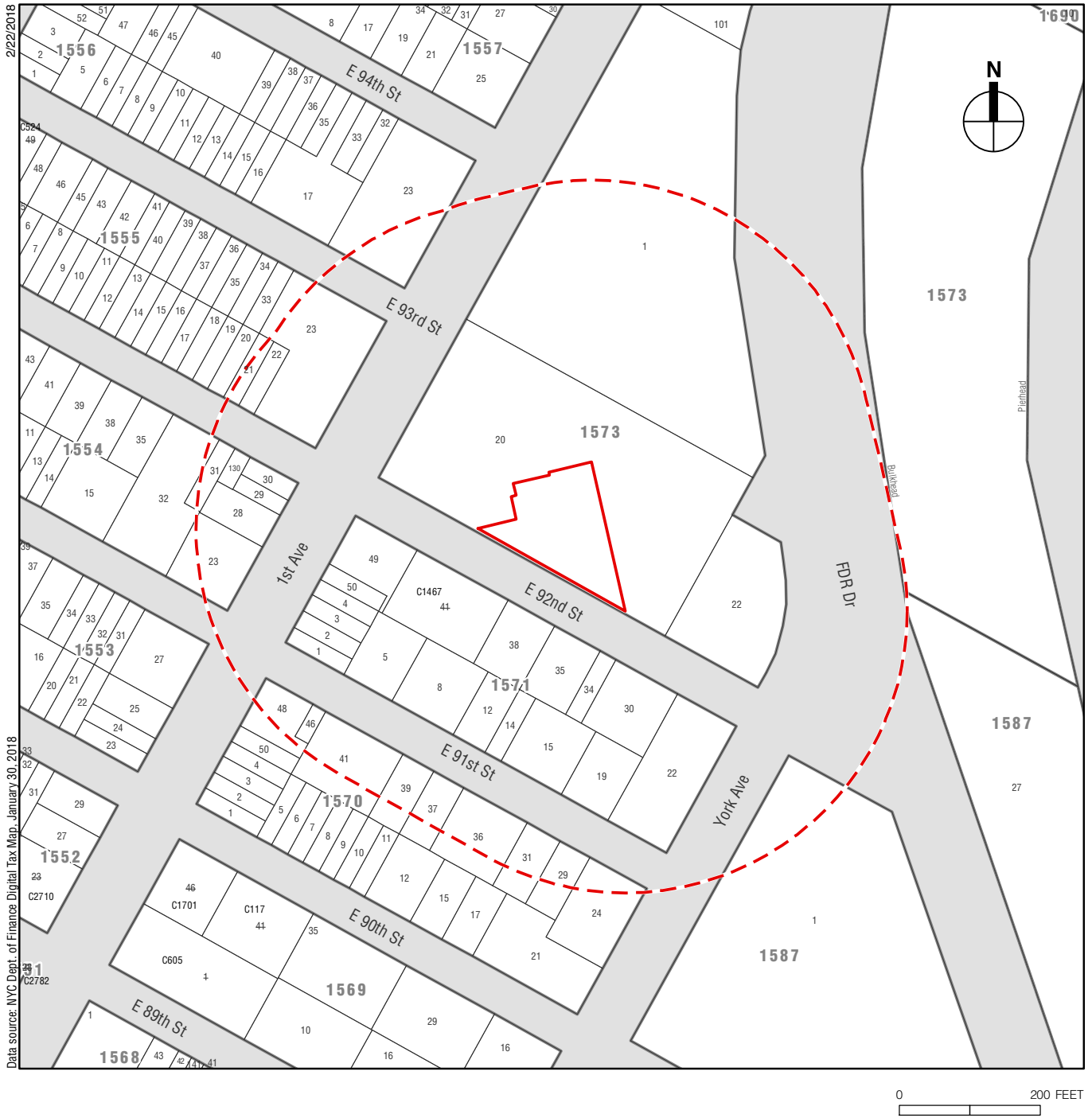
2/22/2018



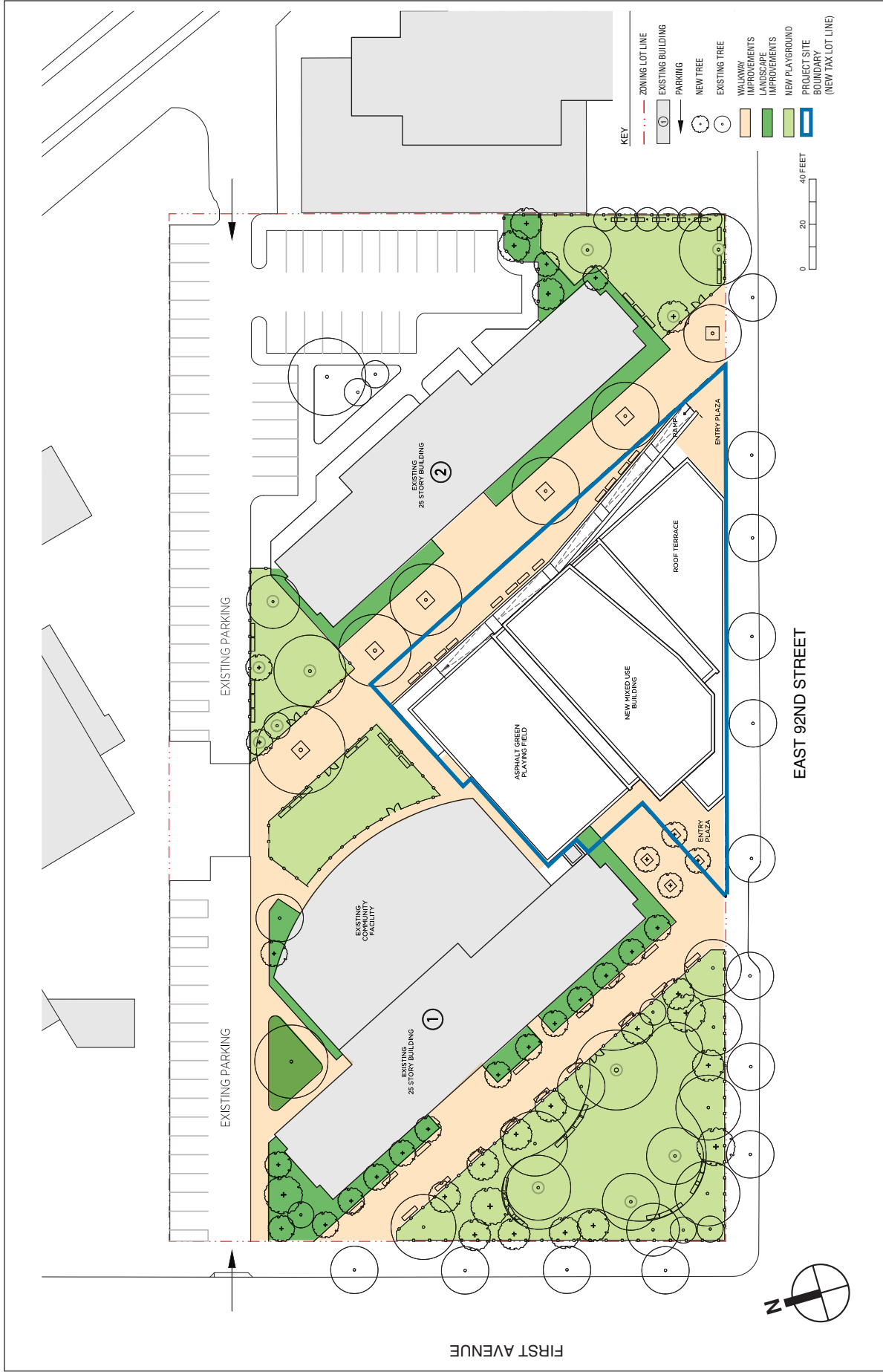
0 200 FEET

-  Project Site
-  Study Area Boundary (400-foot perimeter)

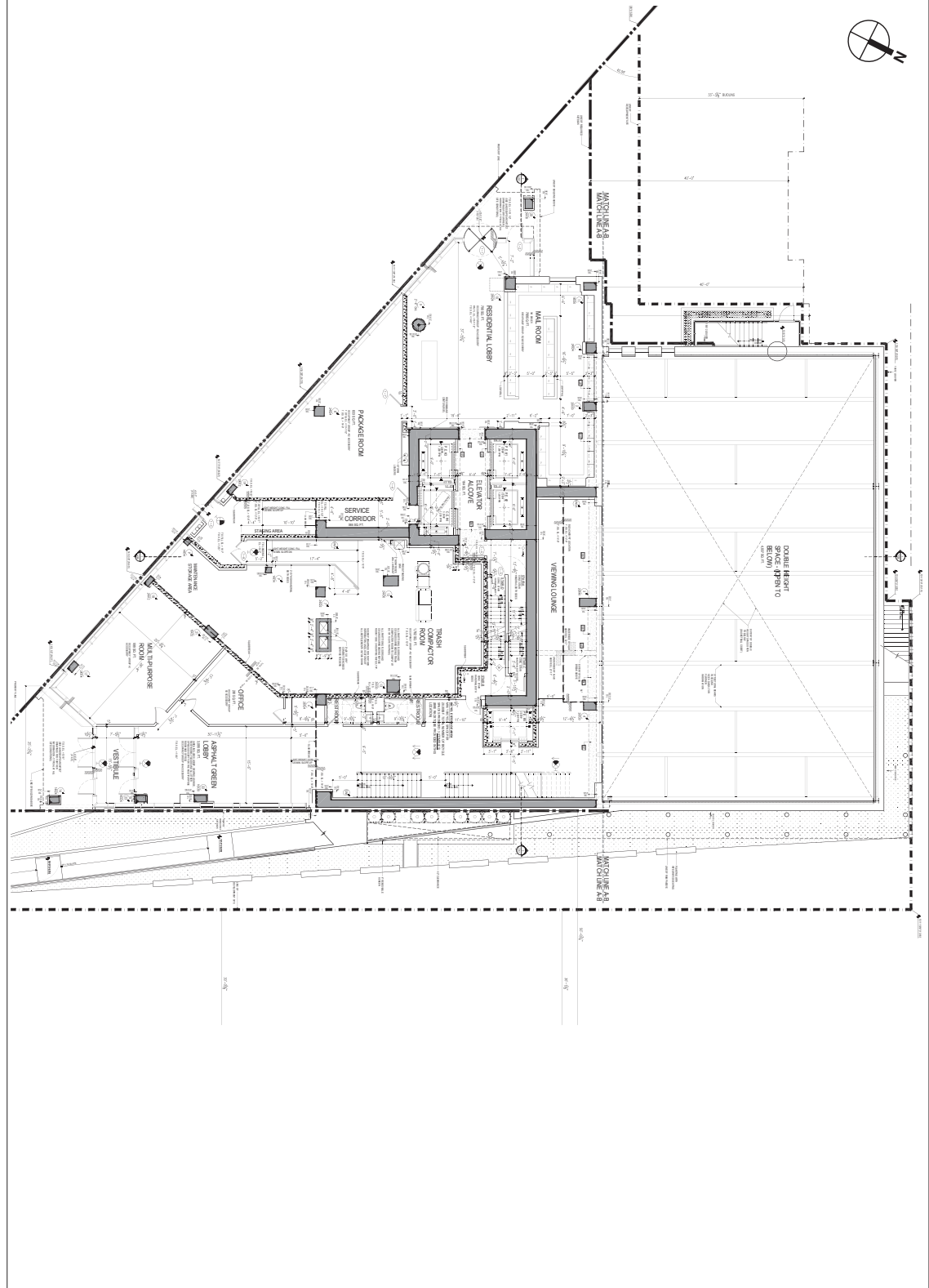


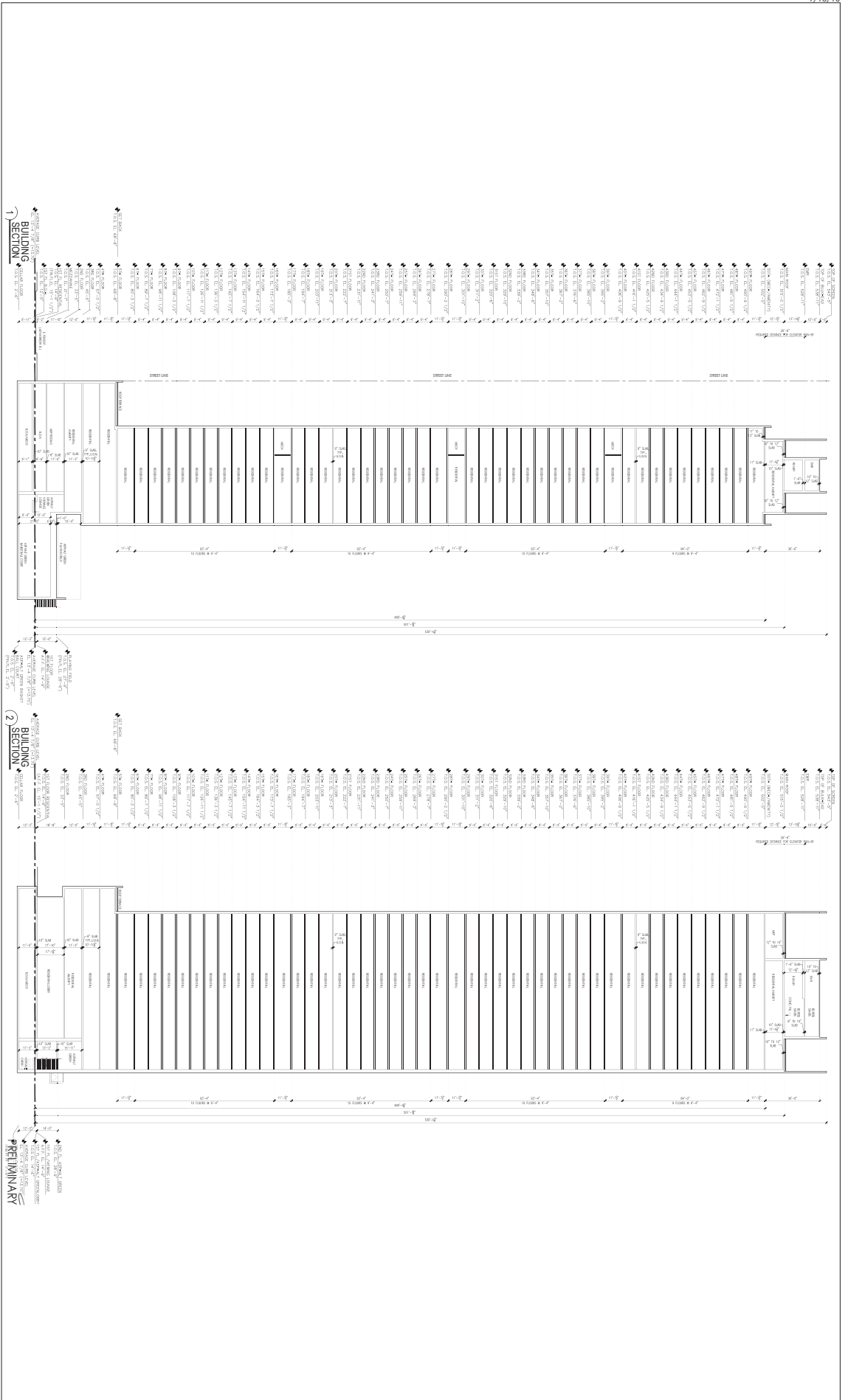


- Project Site Boundary
- Study Area Boundary (400-foot perimeter)
- Tax Lot Boundary
- Tax Block Boundary
- Other Boundary



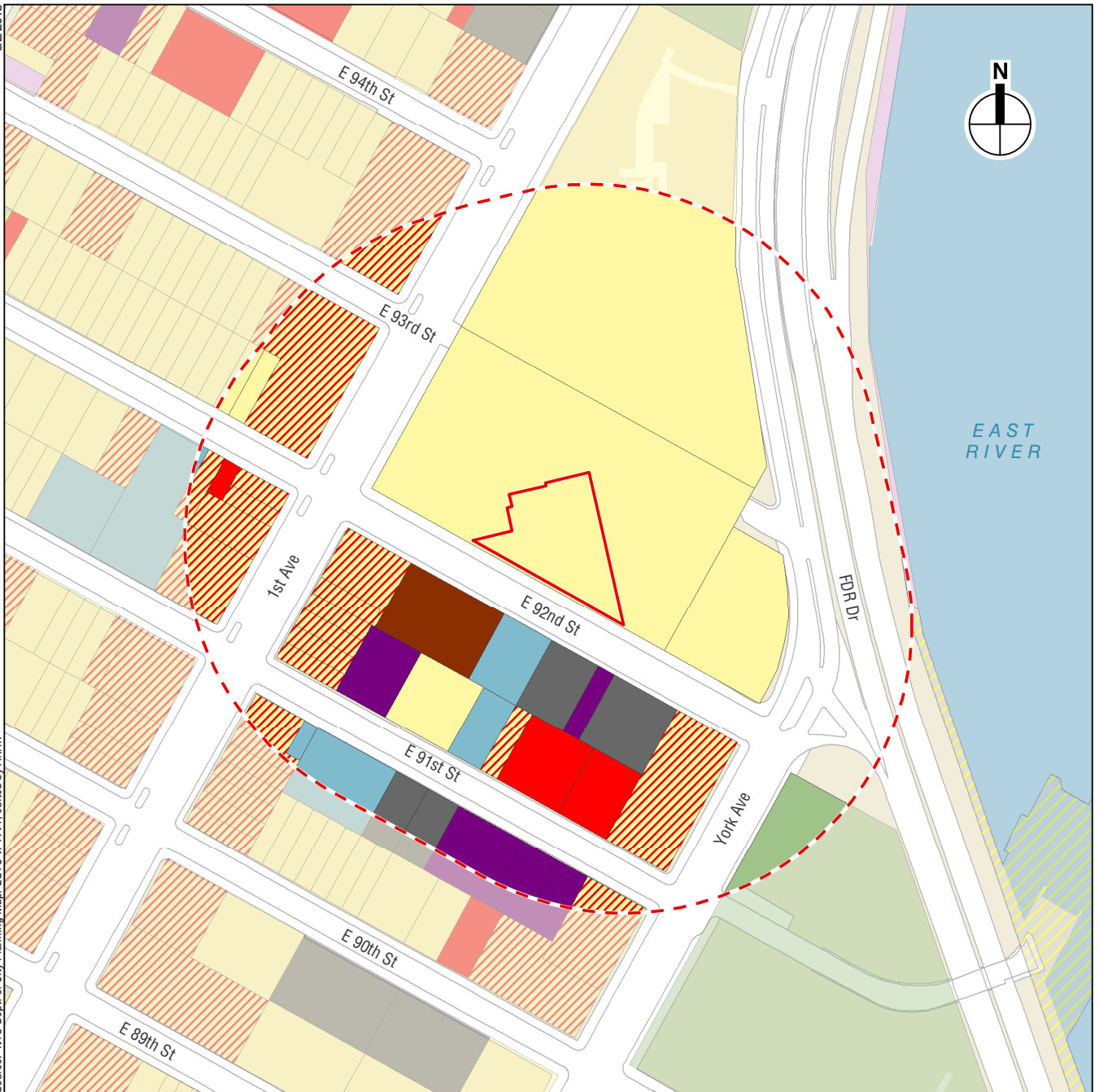
Proposed Project Site Plan
Figure 4





3/2/2018

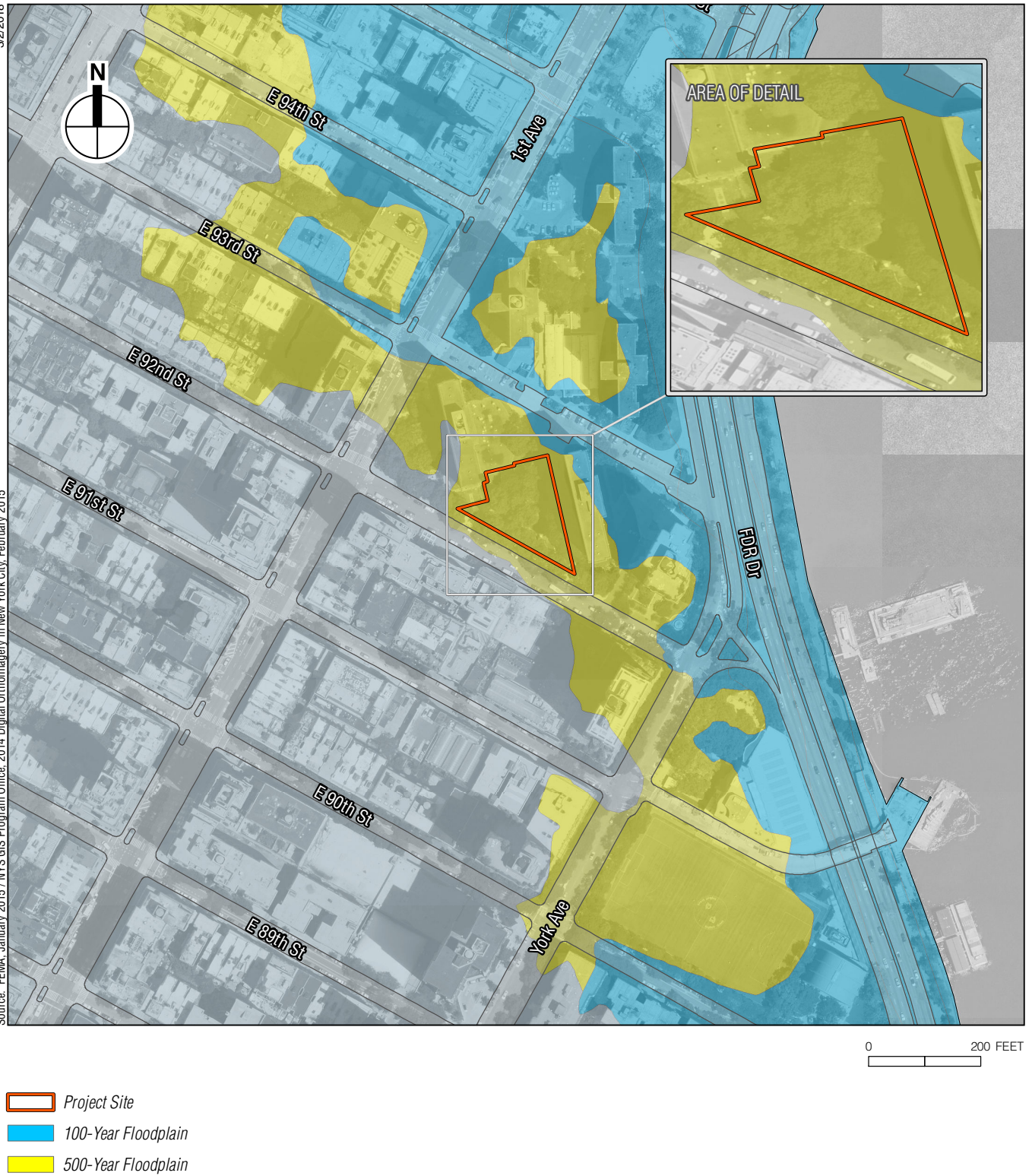
Source: NYC Dept. of City Planning MapPLUTO v. 17v1, edited by AKRF.



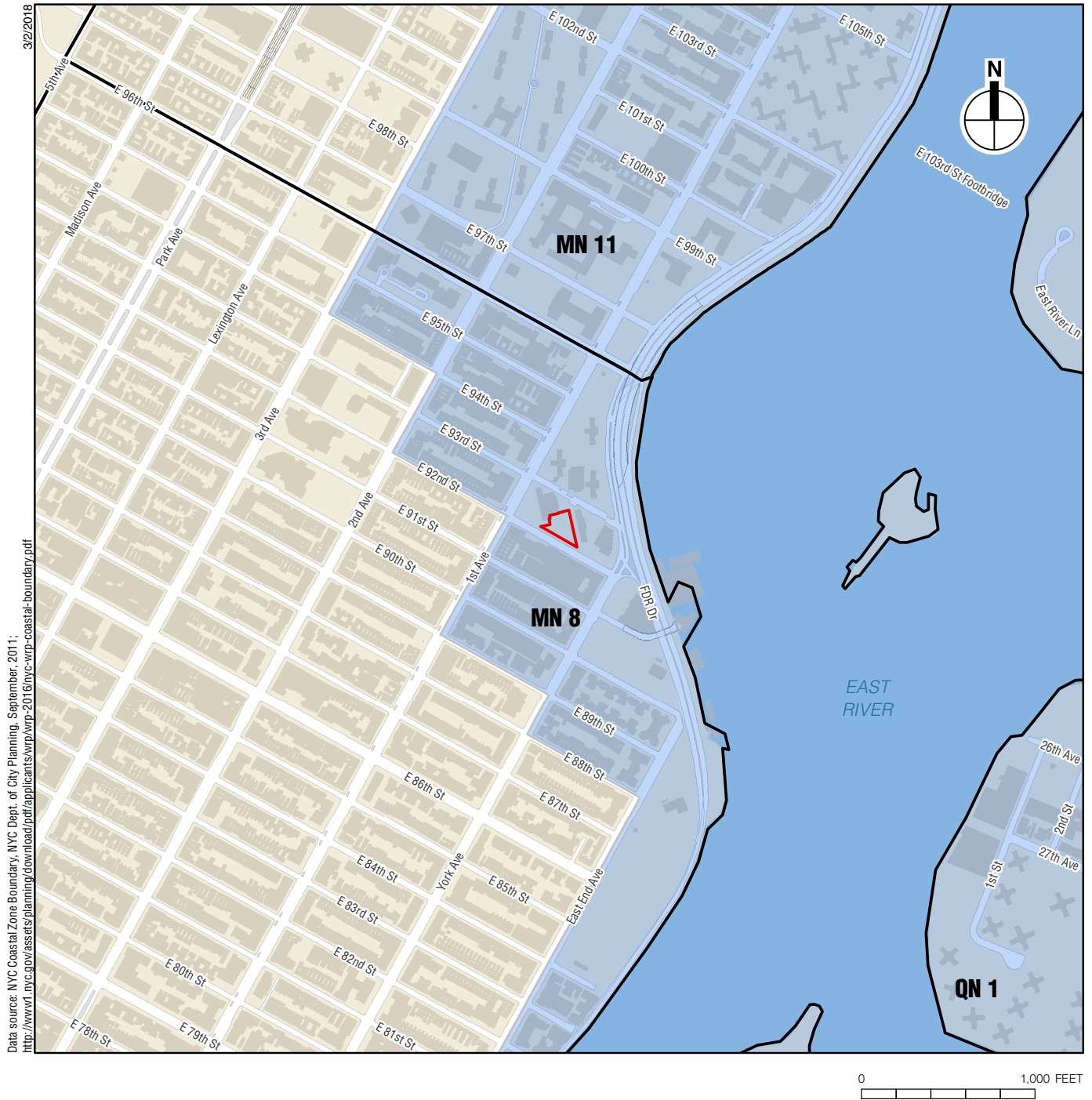
- | | |
|--|------------------------------------|
| Project Site | Parking Facilities |
| Study Area Boundary (400-foot perimeter) | Public Facilities and Institutions |
| Commercial and Office Buildings | Residential |
| Hotels | Residential with Commercial Below |
| Industrial and Manufacturing | Transportation and Utility |
| Open Space and Outdoor Recreation | Under Construction |

BELLWETHER AT YORKVILLE

Land Use
Figure 7







- Project Site
- Coastal Zone Boundary
- MN 8 Community District Boundary

NYC Coastal Zone Boundary
Figure 10



City Environmental Quality Review

ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) FULL FORM

Please fill out and submit to the appropriate agency ([see instructions](#))

Part I: GENERAL INFORMATION					
PROJECT NAME Bellwether at Yorkville					
1. Reference Numbers					
CEQR REFERENCE NUMBER (to be assigned by lead agency) 18CHA006M			BSA REFERENCE NUMBER (if applicable)		
ULURP REFERENCE NUMBER (if applicable)			OTHER REFERENCE NUMBER(S) (if applicable) (e.g., legislative intro, CAPA)		
2a. Lead Agency Information			2b. Applicant Information		
NAME OF LEAD AGENCY New York City Housing Authority (NYCHA)			NAME OF APPLICANT Fetner Properties		
NAME OF LEAD AGENCY CONTACT PERSON Digser Abreu			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Hal Fetner		
ADDRESS 250 Broadway			ADDRESS 675 Third Avenue, Suite 2800		
CITY New York	STATE NY	ZIP 10007	CITY New York	STATE NY	ZIP 10017
TELEPHONE 212-306-3035	EMAIL Digser.Abreu@nycha.nyc.gov		TELEPHONE 212-427-9700	EMAIL hal@fetner.com	
3. Action Classification and Type					
SEQRA Classification					
<input checked="" type="checkbox"/> UNLISTED <input type="checkbox"/> TYPE I: Specify Category (see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended):					
Action Type (refer to Chapter 2 , "Establishing the Analysis Framework" for guidance)					
<input checked="" type="checkbox"/> LOCALIZED ACTION, SITE SPECIFIC <input type="checkbox"/> LOCALIZED ACTION, SMALL AREA <input type="checkbox"/> GENERIC ACTION					
4. Project Description					
<p>The New York City Housing Authority (NYCHA) is seeking approval for (i) the disposition of public housing property owned by NYCHA to Fetner Properties (the "project sponsor") and (ii) mayoral zoning overrides of certain sections of the New York City Zoning Resolution related to height and setback, minimum distance between buildings, and open space ratio (collectively the "proposed actions") in order to facilitate the development of a new mixed-use residential and community facility building (the "proposed project") in the NYCHA Holmes Towers development in the Yorkville neighborhood of Manhattan, Community District 8. The proposed mixed-use building would include 339 dwelling units (DUs), including approximately 169 affordable DUs, and approximately 12,300 gross square feet (gsf) of community facility space.</p> <p>The proposed project would also provide for improvements to the existing Holmes Towers development. These improvements would consist of walkway and landscaping improvements around and between the existing buildings along with improved seating areas and lighting. In addition, the proposed disposition of the project site would provide revenue to NYCHA, a portion of which would be reinvested in the existing Holmes Towers development to address needed maintenance and repairs. For more information, see Attachment A, "Project Description and Screening Analyses."</p>					
Project Location					
BOROUGH Manhattan		COMMUNITY DISTRICT(S) 8		STREET ADDRESS 401 East 92nd Street	
TAX BLOCK(S) AND LOT(S) Block: 1573, Lot: p/o 20			ZIP CODE 10128		
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Roughly bounded by 92nd Street to the south, First Avenue to the west, 93rd Street to the north, and York Avenue/FDR service road to the east.					
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R8				ZONING SECTIONAL MAP NUMBER 9A	
5. Required Actions or Approvals (check all that apply)					
City Planning Commission: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> UNIFORM LAND USE REVIEW PROCEDURE (ULURP)					
<input type="checkbox"/> CITY MAP AMENDMENT	<input type="checkbox"/> ZONING CERTIFICATION	<input type="checkbox"/> CONCESSION			
<input type="checkbox"/> ZONING MAP AMENDMENT	<input type="checkbox"/> ZONING AUTHORIZATION	<input type="checkbox"/> UDAAP			
<input type="checkbox"/> ZONING TEXT AMENDMENT	<input type="checkbox"/> ACQUISITION—REAL PROPERTY	<input type="checkbox"/> REVOCABLE CONSENT			
<input type="checkbox"/> SITE SELECTION—PUBLIC FACILITY	<input type="checkbox"/> DISPOSITION—REAL PROPERTY	<input type="checkbox"/> FRANCHISE			

<input type="checkbox"/> HOUSING PLAN & PROJECT <input type="checkbox"/> SPECIAL PERMIT (if appropriate, specify type: <input type="checkbox"/> modification; <input type="checkbox"/> renewal; <input type="checkbox"/> other); EXPIRATION DATE:	<input type="checkbox"/> OTHER, explain: SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION	
Board of Standards and Appeals: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> VARIANCE (use) <input type="checkbox"/> VARIANCE (bulk) <input type="checkbox"/> SPECIAL PERMIT (if appropriate, specify type: <input type="checkbox"/> modification; <input type="checkbox"/> renewal; <input type="checkbox"/> other); EXPIRATION DATE: SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION		
Department of Environmental Protection: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If "yes," specify:		
Other City Approvals Subject to CEQR (check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> LEGISLATION <input type="checkbox"/> RULEMAKING <input type="checkbox"/> CONSTRUCTION OF PUBLIC FACILITIES <input type="checkbox"/> 384(b)(4) APPROVAL <input checked="" type="checkbox"/> OTHER, explain: Zoning overrides of certain sections of the NYC Zoning Resolution related to height and setback, minimum distance between buildings, and open space ratio. </div> <div style="width: 45%;"> <input checked="" type="checkbox"/> FUNDING OF CONSTRUCTION, specify: Potential financing from the New York City Department of Housing Preservation and Development (HPD) through the Extremely Low and Low-Income Affordability (ELLA) Program and the New York City Housing Development Corporation (HDC) <input type="checkbox"/> POLICY OR PLAN, specify: <input type="checkbox"/> FUNDING OF PROGRAMS, specify: <input type="checkbox"/> PERMITS, specify: </div> </div>		
Other City Approvals Not Subject to CEQR (check all that apply) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC) </div> <div style="width: 45%;"> <input type="checkbox"/> LANDMARKS PRESERVATION COMMISSION APPROVAL <input type="checkbox"/> OTHER, explain: </div> </div>		
State or Federal Actions/Approvals/Funding: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If "yes," specify: United States Department of Housing and Urban Development (HUD) approval for the disposition of NYCHA public housing property in accordance with Section 18 of the U.S. Housing Act of 1937, as amended. NYCHA Board of Trustees approval for the disposition of public housing property at the Holmes Towers development for construction of the proposed project and for easements required for the proposed project. Potential financing from New York State Homes and Community Renewal (HCR)		
6. Site Description: The directly affected area consists of the project site and the area subject to any change in regulatory controls. Except where otherwise indicated, provide the following information with regard to the directly affected area. Graphics: The following graphics must be attached and each box must be checked off before the EAS is complete. Each map must clearly depict the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11 x 17 inches in size and, for paper filings, must be folded to 8.5 x 11 inches.		
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input checked="" type="checkbox"/> SITE LOCATION MAP <input checked="" type="checkbox"/> TAX MAP <input checked="" type="checkbox"/> PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP </div> <div style="width: 30%;"> <input checked="" type="checkbox"/> ZONING MAP <input type="checkbox"/> FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S) </div> <div style="width: 30%;"> <input checked="" type="checkbox"/> SANBORN OR OTHER LAND USE MAP </div> </div>		
Physical Setting (both developed and undeveloped areas) Total directly affected area (sq. ft.): $\pm 20,738$ Roads, buildings, and other paved surfaces (sq. ft.): $\pm 20,738$ Waterbody area (sq. ft.) and type: Other, describe (sq. ft.): A portion of the project site contains landscaped areas for the NYCHA Holmes Towers development.		
7. Physical Dimensions and Scale of Project (if the project affects multiple sites, provide the total development facilitated by the action) SIZE OF PROJECT TO BE DEVELOPED (gross square feet): $\pm 358,000$ NUMBER OF BUILDINGS: 1 HEIGHT OF EACH BUILDING (ft.): ± 530 feet to the top of the bulkhead screen GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): $\pm 358,000$ NUMBER OF STORIES OF EACH BUILDING: 50		
Does the proposed project involve changes in zoning on one or more sites? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If "yes," specify: The total square feet owned or controlled by the applicant: N/A The total square feet not owned or controlled by the applicant: N/A		
Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		

If "yes," indicate the estimated area and volume dimensions of subsurface disturbance (if known):

AREA OF TEMPORARY DISTURBANCE: $\pm 20,738$ sq. ft. (width x length) VOLUME OF DISTURBANCE: $\pm 183,000$ cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: $\pm 20,738$ sq. ft. (width x length)

8. Analysis Year [CEQR Technical Manual Chapter 2](#)

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2021

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 30

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO IF MULTIPLE PHASES, HOW MANY?

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: The proposed project would be constructed in a single phase with a duration of approximately 30 months. Construction would consist of the following primary stages: excavation, foundation, superstructure, exteriors, and interiors and finishing.

9. Predominant Land Use in the Vicinity of the Project (check all that apply)

☒ RESIDENTIAL ☐ MANUFACTURING ☒ COMMERCIAL ☒ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: parking, vacant land

12/13/2017

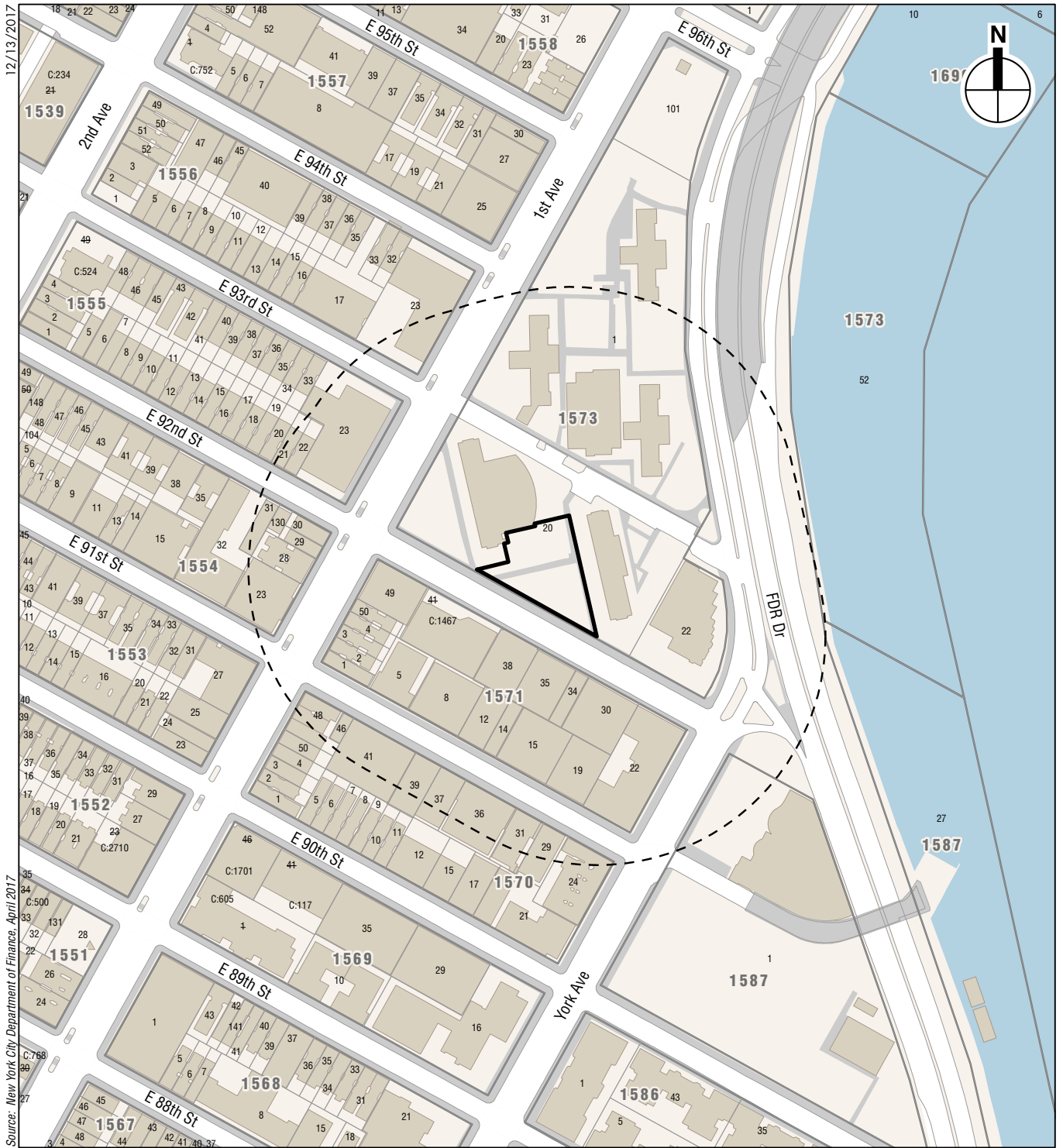







-  Project Site
-  Study Area (400-foot perimeter)

0 200 FEET

BELLWETHER AT YORKVILLE

Project Location
Figure 1



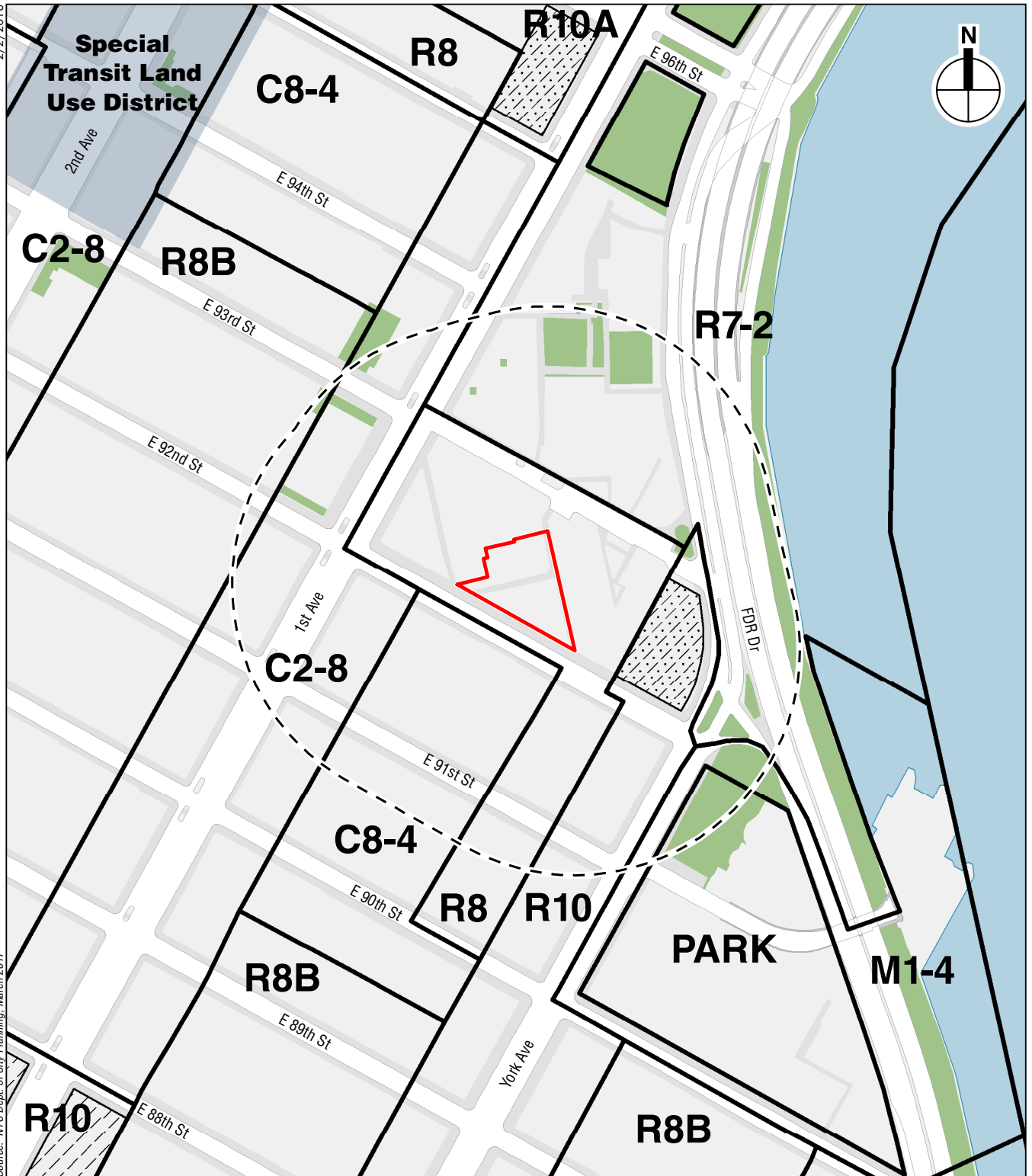
-  Project Site
-  Study Area (400-foot boundary)
-  Tax Block
-  Tax Lot
-  Condo Flag/Condo Number

BELLWETHER AT YORKVILLE

Tax Map
Figure 2

2/2/2018

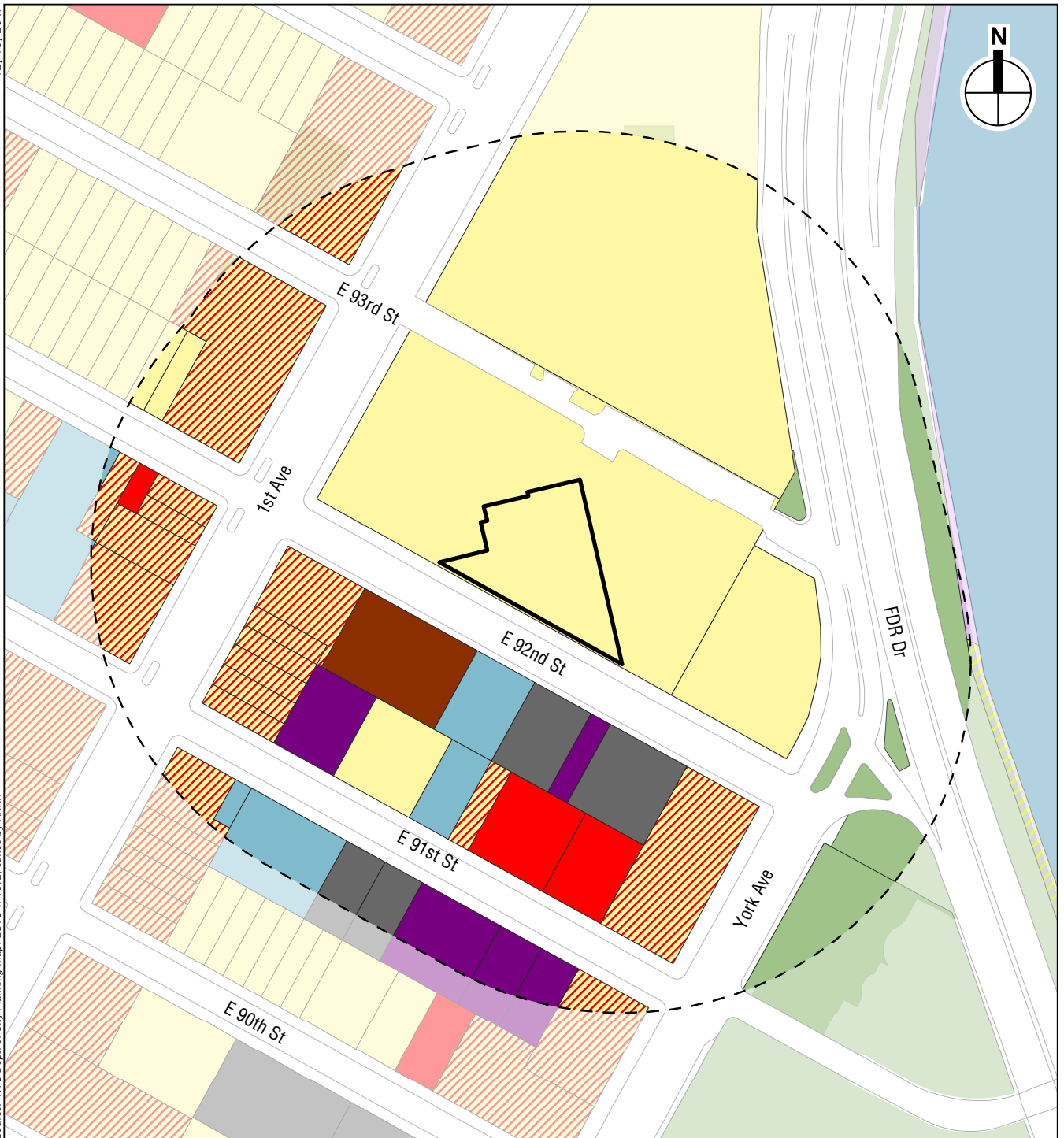
Source: NYC Dept. of City Planning, March 2017



- Project Site
- Study Area (400-foot boundary)
- Zoning Districts
- Special Purpose District
- C1-5 Commercial Overlay District
- C2-5 Commercial Overlay District

12/13/2017

Source: NYC Dept. of City Planning MapPLUTO v. 16v2, edited by AKRF




- | | |
|-----------------------------------|------------------------------------|
| Project Site | Parking Facilities |
| Study Area (400-foot boundary) | Public Facilities and Institutions |
| Commercial and Office Buildings | Residential |
| Hotels | Residential with Commercial Below |
| Industrial and Manufacturing | Transportation and Utility |
| Open Space and Outdoor Recreation | Under Construction |

0 200 FEET



 Project Site

 Study Area (400-foot perimeter)

 Photograph View Direction and Reference No

0 200 FEET

BELLWETHER AT YORKVILLE

Key to Photographs
Figure 5



1



2



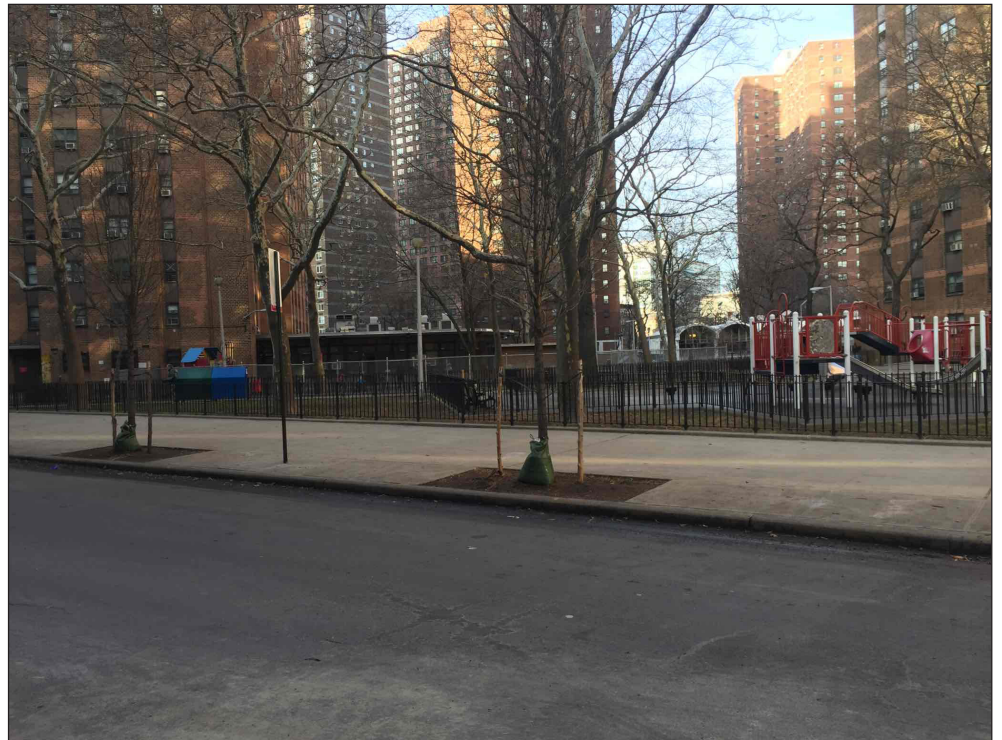
3



4



5



6



DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

The information requested in this table applies to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory control. The increment is the difference between the No-Action and the With-Action conditions.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," specify the following:				
Describe type of residential structures				
No. of dwelling units			339	339
No. of low- to moderate-income units			169	169
Gross floor area (sq. ft.)			±345,800 (residential and building mechanical space)	+345,800
Commercial	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify the following:				
Describe type (retail, office, other)				
Gross floor area (sq. ft.)				
Manufacturing/Industrial	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify the following:				
Type of use				
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," specify the following:				
Type			Recreation space	
Gross floor area (sq. ft.)			±12,300	+12,300
Vacant Land	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," describe:				
Publicly Accessible Open Space	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):				
Other Land Uses	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," describe:	Accessory play areas serving the NYCHA Holmes Towers development	Accessory play areas serving the NYCHA Holmes Towers development		Existing accessory play areas would be replaced with new and improved play areas within the Holmes Towers development as part of the proposed project.
PARKING				
Garages	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Attended or non-attended				
Lots	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Other (includes street parking)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," describe:				
POPULATION				
Residents	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," specify number:			607	+607
Briefly explain how the number of residents was calculated:	1.79 persons per household x 339 DUs			
Businesses	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," specify the following:				
No. and type			Community facility employees	
No. and type of workers by business			12	+12
No. and type of non-residents who are not workers				
Briefly explain how the number of businesses was calculated:	The employee number for the Asphalt Green community facility was calculated using an employee generation rate of 1,000 sf of community facility space per employee.			
Other (students, visitors, concert-goers, etc.)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If any, specify type and number:				
Briefly explain how the number was calculated:				
ZONING				
Zoning classification	R8	R8	R8	NA
Maximum amount of floor area that can be developed	6.02 FAR (proposed project would utilize development rights from the Holmes Towers development)	No change	No change	NA
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Residential, commercial, institutional, parking	No change	No change	NA
Attach any additional information that may be needed to describe the project.				
If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

Part II: TECHNICAL ANALYSIS

INSTRUCTIONS: For each of the analysis categories listed in this section, assess the proposed project's impacts based on the thresholds and criteria presented in the CEQR Technical Manual. Check each box that applies.


- If the proposed project can be demonstrated not to meet or exceed the threshold, check the "no" box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the "yes" box.
- For each "yes" response, provide additional analyses (and, if needed, attach supporting information) based on guidance in the CEQR Technical Manual to determine whether the potential for significant impacts exists. Please note that a "yes" answer does not mean that an EIS must be prepared—it means that more information may be required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to provide additional information to support the Full EAS Form. For example, if a question is answered "no," an agency may request a short explanation for this response.

	YES	NO
1. LAND USE, ZONING, AND PUBLIC POLICY: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Is there the potential to affect an applicable public policy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. See Attachment B		
(e) Is the project a large, publicly sponsored project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," complete the Consistency Assessment Form . See EAS Appendix B		
2. SOCIOECONOMIC CONDITIONS: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of more than 200 residential units or 200,000 square feet of commercial space?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ If "yes," answer both questions 2(b)(ii) and 2(b)(iv) below.		
o Directly displace 500 or more residents?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ If "yes," answer questions 2(b)(i), 2(b)(ii), and 2(b)(iv) below.		
o Directly displace more than 100 employees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ If "yes," answer questions under 2(b)(iii) and 2(b)(iv) below.		
o Affect conditions in a specific industry?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ If "yes," answer question 2(b)(v) below.		
(b) If "yes" to any of the above, attach supporting information to answer the relevant questions below. If "no" was checked for each category above, the remaining questions in this technical area do not need to be answered.		
i. Direct Residential Displacement		
o If more than 500 residents would be displaced, would these residents represent more than 5% of the primary study area population?	<input type="checkbox"/>	<input type="checkbox"/>
o If "yes," is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?	<input type="checkbox"/>	<input type="checkbox"/>
ii. Indirect Residential Displacement		
o Would expected average incomes of the new population exceed the average incomes of study area populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes:"		
▪ Would the population of the primary study area increase by more than 10 percent?	<input type="checkbox"/>	<input type="checkbox"/>
▪ Would the population of the primary study area increase by more than 5 percent in an area where there is the potential to accelerate trends toward increasing rents?	<input type="checkbox"/>	<input type="checkbox"/>
o If "yes" to either of the preceding questions, would more than 5 percent of all housing units be renter-occupied and unprotected?	<input type="checkbox"/>	<input type="checkbox"/>
iii. Direct Business Displacement		
o Do any of the displaced businesses provide goods or services that otherwise would not be found within the trade area, either under existing conditions or in the future with the proposed project?	<input type="checkbox"/>	<input type="checkbox"/>
o Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve,	<input type="checkbox"/>	<input type="checkbox"/>

	YES	NO
enhance, or otherwise protect it?		
iv. Indirect Business Displacement		
o Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Effects on Industry		
o Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	<input type="checkbox"/>	<input type="checkbox"/>
o Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	<input type="checkbox"/>	<input type="checkbox"/>
3. COMMUNITY FACILITIES: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
o Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Indirect Effects		
i. Child Care Centers		
o Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project result in a collective utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?	<input type="checkbox"/>	<input type="checkbox"/>
o If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	<input type="checkbox"/>	<input type="checkbox"/>
ii. Libraries		
o Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	<input type="checkbox"/>	<input type="checkbox"/>
o If "yes," would the additional population impair the delivery of library services in the study area?	<input type="checkbox"/>	<input type="checkbox"/>
iii. Public Schools		
o Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 100 percent?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," would the project increase this collective utilization rate by 5 percent or more from the No-Action scenario?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Health Care Facilities		
o Would the project result in the introduction of a sizeable new neighborhood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project affect the operation of health care facilities in the area?	<input type="checkbox"/>	<input type="checkbox"/>
v. Fire and Police Protection		
o Would the project result in the introduction of a sizeable new neighborhood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project affect the operation of fire or police protection in the area?	<input type="checkbox"/>	<input type="checkbox"/>
4. OPEN SPACE: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Is the project located within an under-served area in the Bronx , Brooklyn , Manhattan , Queens , or Staten Island ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If "yes," would the project generate more than 50 additional residents or 125 additional employees?	<input type="checkbox"/>	<input type="checkbox"/>
(d) Is the project located within a well-served area in the Bronx , Brooklyn , Manhattan , Queens , or Staten Island ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If "yes," would the project generate more than 350 additional residents or 750 additional employees?	<input type="checkbox"/>	<input type="checkbox"/>
(f) If the project is located in an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(g) If "yes" to questions (c), (e), or (f) above, attach supporting information to answer the following:		
o If in an under-served area, would the project result in a decrease in the open space ratio by more than 1 percent?	<input type="checkbox"/>	<input type="checkbox"/>
o If in an area that is not under-served, would the project result in a decrease in the open space ratio by more than 5	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	YES	NO
percent?		
<ul style="list-style-type: none"> o If "yes," are there qualitative considerations, such as the quality of open space, that need to be considered? Please specify: See Attachment E 	<input type="checkbox"/>	<input type="checkbox"/>
5. SHADOWS: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. See Attachment F		
6. HISTORIC AND CULTURAL RESOURCES: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attachment G		
7. URBAN DESIGN AND VISUAL RESOURCES: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If "yes" to either of the above, please provide the information requested in Chapter 10 . See Attachment H		
8. NATURAL RESOURCES: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," list the resources and attach supporting information on whether the project would affect any of these resources. See Attachment A		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," complete the Jamaica Bay Watershed Form and submit according to its instructions .		
9. HAZARDOUS MATERIALS: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (e.g., gas stations, oil storage facilities, heating oil storage)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h) Has a Phase I Environmental Site Assessment been performed for the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Attachment I	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(i) Based on the Phase I Assessment, is a Phase II Investigation needed? See Attachment I	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. WATER AND SEWER INFRASTRUCTURE: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	YES	NO
commercial space in the Bronx, Brooklyn, Staten Island, or Queens?		
(c) If the proposed project located in a separately sewered area , would it result in the same or greater development than that listed in Table 13-1 in Chapter 13 ?	<input type="checkbox"/>	<input type="checkbox"/>
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas , including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	<input type="checkbox"/>	<input type="checkbox"/>
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation.		
11. SOLID WASTE AND SANITATION SERVICES: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14 , the project's projected operational solid waste generation is estimated to be (pounds per week): ±14,000		
o Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	<input type="checkbox"/>	<input type="checkbox"/>
12. ENERGY: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15 , the project's projected energy use is estimated to be (annual BTUs): ±45,000,000		
(b) Would the proposed project affect the transmission or generation of energy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. TRANSPORTATION: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) If "yes," conduct the appropriate screening analyses, attach back up data as needed for each stage, and answer the following questions:		
o Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? <i>**It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.</i>	<input type="checkbox"/>	<input type="checkbox"/>
o Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway/rail trips per station or line?	<input type="checkbox"/>	<input type="checkbox"/>
o Would the proposed project result in more than 200 pedestrian trips per project peak hour?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14. AIR QUALITY: CEQR Technical Manual Chapter 17		
(a) <i>Mobile Sources:</i> Would the proposed project result in the conditions outlined in Section 210 in Chapter 17 ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) <i>Stationary Sources:</i> Would the proposed project result in the conditions outlined in Section 220 in Chapter 17 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17 ? (Attach graph as needed) See Attachment K	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Does the proposed project involve multiple buildings on the project site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Attachment K		
15. GREENHOUSE GAS EMISSIONS: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project fundamentally change the City's solid waste management system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the proposed project result in the development of 350,000 square feet or more?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18 ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	YES	NO
o If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008 ; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	<input type="checkbox"/>	<input type="checkbox"/>
16. NOISE: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Attachment L		
17. PUBLIC HEALTH: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20 , "Public Health." Attach a preliminary analysis, if necessary.		
18. NEIGHBORHOOD CHARACTER: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21 , "Neighborhood Character." Attach a preliminary analysis, if necessary. See Attachment A		
19. CONSTRUCTION: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, etc.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o The operation of several pieces of diesel equipment in a single location at peak construction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Closure of a community facility or disruption in its services?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Activities within 400 feet of a historic or cultural resource?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Disturbance of a site containing or adjacent to a site containing natural resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22 , "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See Attachment M		
20. APPLICANT'S CERTIFICATION		
I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of the pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.		
Still under oath, I further swear or affirm that I make this statement in my capacity as the applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.		
APPLICANT/REPRESENTATIVE NAME Connor Lacefield, AKRF, Inc.	SIGNATURE 	DATE 10/29/18
PLEASE NOTE THAT APPLICANTS MAY BE REQUIRED TO SUBSTANTIATE RESPONSES IN THIS FORM AT THE DISCRETION OF THE LEAD AGENCY SO THAT IT MAY SUPPORT ITS DETERMINATION OF SIGNIFICANCE.		

Part III: DETERMINATION OF SIGNIFICANCE (To Be Completed by Lead Agency)

INSTRUCTIONS: In completing Part III, the lead agency should consult 6 NYCRR 617.7 and 43 RCNY § 6-06 (Executive Order 91 or 1977, as amended), which contain the State and City criteria for determining significance.

1. For each of the impact categories listed below, consider whether the project may have a significant adverse effect on the environment, taking into account its (a) location; (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude.

**Potentially
Significant
Adverse Impact**

YES NO

IMPACT CATEGORY

Land Use, Zoning, and Public Policy

Socioeconomic Conditions

Community Facilities and Services

Open Space

Shadows

Historic and Cultural Resources

Urban Design/Visual Resources

Natural Resources

Hazardous Materials

Water and Sewer Infrastructure

Solid Waste and Sanitation Services

Energy

Transportation

Air Quality

Greenhouse Gas Emissions

Noise

Public Health

Neighborhood Character

Construction

2. Are there any aspects of the project relevant to the determination of whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials?

If there are such impacts, attach an explanation stating whether, as a result of them, the project may have a significant impact on the environment.

3. Check determination to be issued by the lead agency:

- ☐ **Positive Declaration:** If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a *Positive Declaration* and prepares a draft Scope of Work for the Environmental Impact Statement (EIS).
- ☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements of 6 NYCRR Part 617.
- ☒ **Negative Declaration:** If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a *Negative Declaration*. The *Negative Declaration* may be prepared as a separate document (see [template](#)) or using the embedded Negative Declaration on the next page.

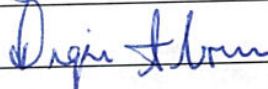
4. LEAD AGENCY'S CERTIFICATION

TITLE NYCHA Environmental Coordinator

LEAD AGENCY NYCHA

NAME Digser Abreu

DATE 10-31-2018

SIGNATURE 



NEW YORK CITY HOUSING AUTHORITY
250 BROADWAY • NEW YORK, NY 10007
TEL: (212) 306-3000 • <http://nyc.gov/nycha>

**STATE ENVIRONMENTAL QUALITY REVIEW
NEGATIVE DECLARATION
NOTICE OF DETERMINATION OF NON-SIGNIFICANCE**

DATE: October 31st, 2018

CEQR PROJECT NO.: 18CHA006M

LEAD AGENCY: New York City Housing Authority
250 Broadway
New York, New York 10007

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

The New York City Housing Authority ("NYCHA"), as Lead Agency, has determined that the proposed action described below will not have a significant effect on the environment and a Draft Environmental Impact Statement ("DEIS") will not be prepared.

NAME OF ACTION: Holmes Towers

LOCATION: 401 East 92nd Street (Block 1573, p/o Lot 20)

**CEQR/ SEQRA
CLASSIFICATION:** Unlisted

NEGATIVE DECLARATION

Description of Action

The project site, "Holmes Tower", includes the area fronting the north side of East 92nd Street, between two residential buildings located at 405 East 92nd Street and 1780 First Avenue (Block 1573 and part of Lot 20). The project site is approximately 21,000 sf and is located at 401 East 92nd Street within the Holmes Towers Development in the Yorkville neighborhood of Manhattan, Community District 8. The NYCHA superblock is bounded by First Avenue, East 92nd Street, a private development and the FDR Drive to the east, and the Isaacs Houses and a public park to the north extending to East 96th Street. The site currently contains a play area and walkways. The proposal involves an application by NYCHA to HUD for the disposition of the NYCHA-owned property to the selected developer, Fetner Properties, Inc., or its affiliate, pursuant to Section 18 of the U.S. Housing Act of 1937, as amended.

The Proposed Project would be 50 stories with an overall maximum height of approximately 530 feet above grade. The Proposed Project would have a four-story base (approximately 55 feet tall) along East 92nd Street with a roof terrace for building residents. The northern portion of the building would have a one-story base (approximately 14 feet tall) with a rooftop playing field for the community facility use. The project sponsor proposes the construction of an approximately 358,000-gross square foot (gsf) mixed-use building containing 339 DUs, including 169 affordable DUs, and approximately 12,300 gsf of community facility space.

The proposed residential uses would include amenities for tenants, including fitness centers, children's play rooms, and a roof terrace. The proposed community facility use would be located on the cellar, first, and second floors of the Proposed Project and would include a gymnasium and rooftop playing field. The proposed community facility is expected to be operated by Asphalt Green, a nonprofit organization that operates two fitness centers in Manhattan and provides instructional fitness classes and programs for the community.

The Proposed Project would also provide for improvements to the existing Holmes Towers development. These improvements would consist of new play areas, walkway and landscaping improvements around and between the existing buildings, improved seating areas, and new lighting. In addition, the proposed disposition of the project site would provide revenue to NYCHA, a portion of which would be reinvested in the existing Holmes Towers development to address needed maintenance and repairs.

The Proposed Project would conform to all Waterfront Revitalization Program requirements as per the New York City Department of City Planning ("DCP") and U.S. Department of State ("DOS"). To facilitate this project, funding from various state and local agencies is expected, including applicable funding from the New York City Department of Housing Preservation and Development ("HPD") and the New York City Housing Development Corporation ("HDC").

The Proposed Project would require the following actions/approvals:

Federal Approvals:

- United States Department of Housing and Urban Development (HUD) approval for the disposition of NYCHA public housing property in accordance with Section 18 of the U.S. Housing Act of 1937, as amended. The New York City Department of Housing Preservation and Development (HPD) will be acting as the Responsible Entity on behalf of NYCHA under 24 CFR Part 58 on the disposition action.

New York State Approvals:

- NYCHA Board of Trustees approval for the disposition of public housing property at the Holmes Towers development for construction of the Proposed Project; and
- Potential financing from New York State Homes and Community Renewal (HCR) for affordable housing construction.

New York City Approvals:

- Mayoral overrides of sections of the New York City Zoning Resolution necessary to facilitate the Proposed Project, including regulations relating to setback and sky exposure plane, minimum distance between buildings, and open space ratio; and
- Potential financing from City agencies (HPD through the Extremely Low and Low-Income Affordability [ELLA] program and/or the New York City Housing Development Corporation [HDC]) for affordable housing construction.

Reasons for Supporting This Determination:

A comprehensive Environmental Assessment Form ("EAF") and Supplemental Environmental Studies for the proposed action was completed and issued in October 2018. Based upon these documents, NYCHA has determined that the proposed actions will have no significant adverse environmental effects on proposed site.

As a condition of the approval, the proposed project includes measures to avoid potential impacts with respect to hazardous material. These measures are identified below and will be required through the Development Agreement between the NYCHA and the project sponsor, Fetner Properties (or an affiliated entity).

Hazardous Material:

Following the completion of the ASTM Phase I Environmental Site Assessment E 1527-05 and the ASTM Phase II Environmental Site Assessment E 1903-11, the project sponsor enrolled in the New York State Department of Environmental Conservation's (NYSDEC) Brownfield Cleanup Program (BCP). Currently, NYSDEC is reviewing the Phase II Site Investigation report and the Remediation Plan. Written approval of the Remediation Plan

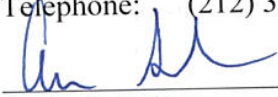
(BCP Decision Document) from NYSDEC would be required prior to closing. At the completion of the remedial activities, NYSDEC would review and approve a Closure Report documenting the implementation of the site remedy.

For further information contact:

Contact: Digser Abreu, Environmental Planner

Address: New York City Housing Authority
250 Broadway, New York, NY 10007

Telephone: (212) 306-3035



Arden Sokolow
NYCHA Chief of Staff



Date

A. PROJECT DESCRIPTION

The New York City Housing Authority (NYCHA) is seeking approval for (i) the disposition of public housing property owned by NYCHA to Fetner Properties (the “project sponsor”); and (ii) mayoral zoning overrides of certain sections of the New York City Zoning Resolution related to height and setback, minimum distance between buildings, and open space ratio (collectively, the “proposed actions”). The proposed actions would facilitate the development of a mixed-use residential and community facility building (the “proposed project”) at a site on the northern side of East 92nd Street between First and York Avenues (a portion of Block 1573, Lot 20; the “project site”) in the Yorkville neighborhood of Manhattan, Community District 8 (see **Figure A-1**).

The project site is a portion of the NYCHA John Haynes Holmes Towers development (the “Holmes Towers development”). The Holmes Towers development is located within the block bounded by First Avenue, East 92nd Street, Franklin D. Roosevelt (FDR) Drive and York Avenue, and East 96th Street. The Holmes Towers development consists of two 25-story buildings containing 537 dwelling units (DUs) and ground-floor retail and community facility uses. The project site currently contains two play areas, landscaping, and walkways serving the Holmes Towers development. The block also contains the NYCHA Stanley M. Isaacs Houses development, a public park along East 96th Street, a market-rate residential building at East 92nd Street and York Avenue, surface parking, and walkways and play areas associated with the NYCHA developments.

DESCRIPTION OF THE PROPOSED PROJECT

The proposed project would result in the development of an approximately 358,000-gross square foot (gsf) mixed-use building containing 339 DUs, including 169 affordable DUs, and approximately 12,300 gsf of community facility space (see **Table A-1**). The proposed building would be 50 stories, with an overall height of approximately 502 feet to the roof of the highest occupied floor and approximately 530 feet to the top of the bulkhead screen. The proposed project would have a four-story base (approximately 55 feet tall) along East 92nd Street with a roof terrace for building residents. The northern portion of the building would have a one-story base (approximately 14 feet tall) with an outdoor rooftop playing field for the community facility use (see **Figures A-2 through A-5**).


Table A-1
Proposed Project Development Program

	Total gsf	DUs	Community Facility gsf
Proposed Project	358,112	339 (including 169 affordable)	12,315
Note: gsf = gross square feet			

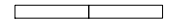
12/13/2017



 Project Site

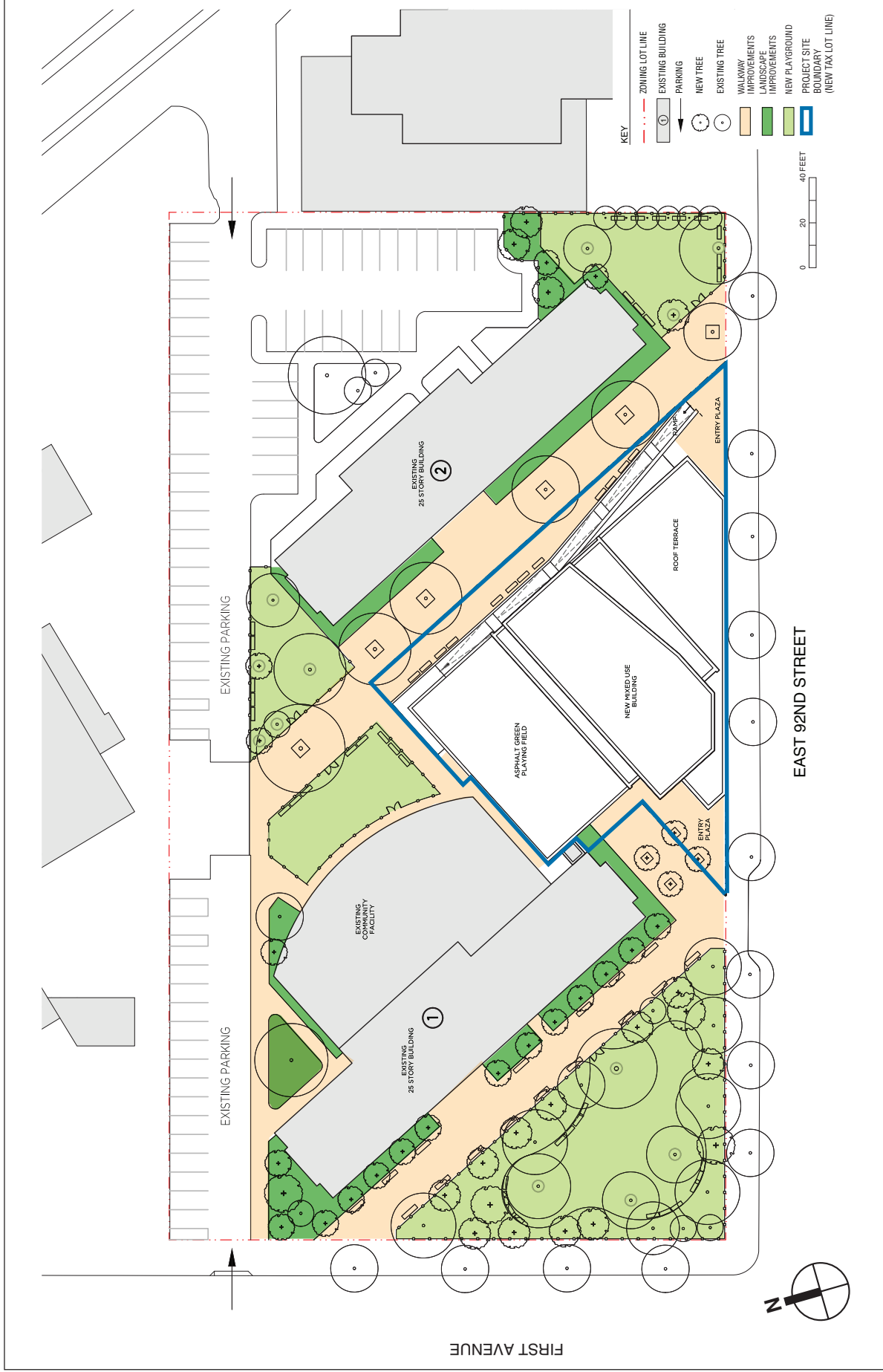
 Study Area (400-foot perimeter)

0 200 FEET

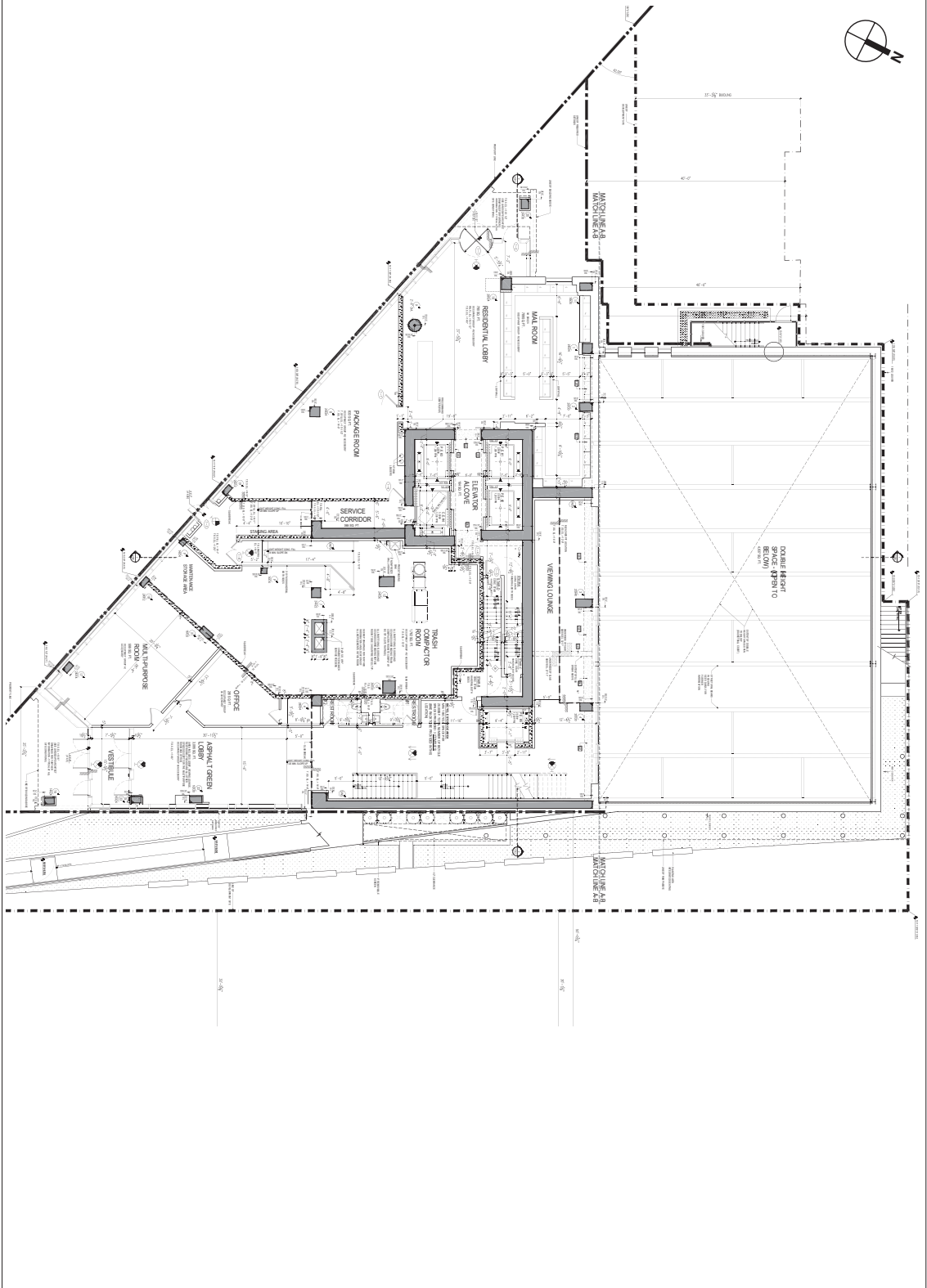


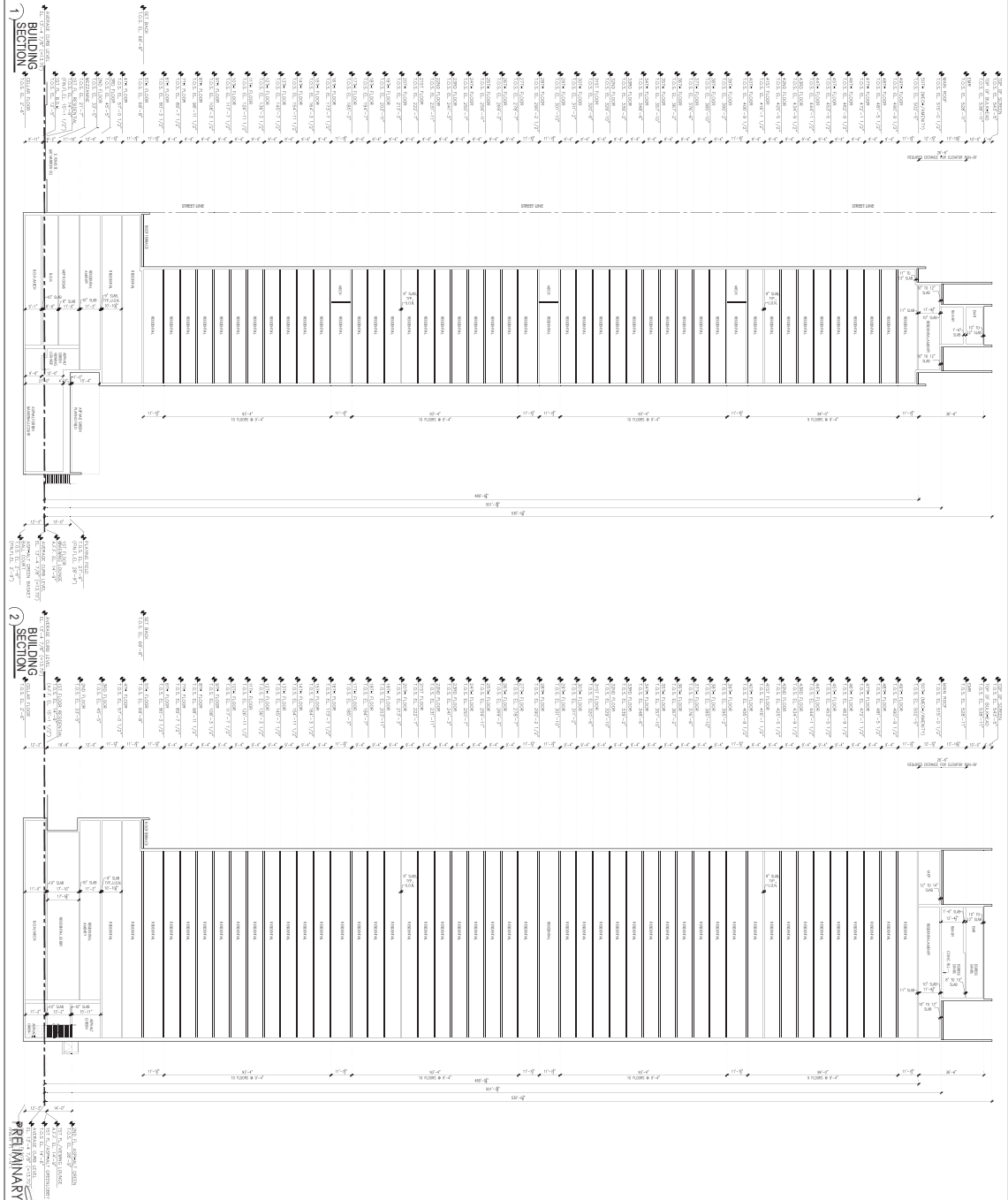
BELLWETHER AT YORKVILLE

Project Location
Figure A-1



Proposed Project Site Plan
Figure A-2







Source: FXFOWLE

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

As noted above, approximately 50 percent of the proposed project's DUs would be affordable units. The project sponsor anticipates targeting the affordable DUs as follows:

- 10 percent of the affordable DUs for persons making up to 30 percent of the area median income (AMI);
- 15 percent of the affordable DUs for persons making up to 40 percent of AMI;
- 15 percent of the affordable DUs for persons making up to 50 percent of AMI; and
- 60 percent of the affordable DUs for persons making up to 60 percent of AMI.

The proposed residential uses would include amenities for tenants, including fitness centers, children's play rooms, and a roof terrace. The building entrance for residential uses would be located along East 92nd Street on the west side of the project site. The proposed project would utilize Passive House design principles for energy efficiency and would meet or exceed the standards of Enterprise Green Communities, a green building framework for affordable housing development.

The proposed community facility use is expected to be operated by Asphalt Green, a nonprofit organization that operates two fitness centers in Manhattan and provides instructional fitness classes and programs for the community. The proposed community facility use would be located on the cellar, first, and second floors of the proposed project and would include a recreation facility, indoor basketball court, and outdoor rooftop playing field. The entrance for the community facility use would be located on along East 92nd Street on the east side of the project site. The proposed community facility use would be available for all residents of the existing Holmes Towers development.

The proposed project would also provide for improvements to the existing Holmes Towers development. These improvements would consist of walkway and landscaping improvements around and between the existing buildings, as shown on **Figure A-2**, along with improved seating areas and lighting. The proposed project also includes three new and improved play areas in the Holmes Towers development to replace the existing play areas within the project site. These new playgrounds would be located in the southwest, southeast, and north-central portions of the campus, as shown on **Figure A-2**. In addition, the proposed disposition of the project site would provide revenue to NYCHA, a portion of which would be reinvested in the Holmes Towers development to address needed maintenance and repairs.

The proposed project is expected to be complete and fully occupied by 2021.

PROPOSED ACTIONS

The proposed project would require the following discretionary approvals:

FEDERAL APPROVALS

- United States Department of Housing and Urban Development (HUD) approval for the disposition of NYCHA public housing property in accordance with Section 18 of the U.S. Housing Act of 1937, as amended. The New York City Department of Housing Preservation and Development (HPD) will be acting as the Responsible Entity on behalf of NYCHA under 24 CFR Part 58 on the disposition action.

NEW YORK STATE APPROVALS

- NYCHA Board of Trustees approval for the disposition of public housing property at the Holmes Towers development for construction of the proposed project and for easements required for the proposed project.
- Potential financing from New York State Homes and Community Renewal (HCR) for affordable housing construction.

NEW YORK CITY APPROVALS

- Mayoral overrides of sections of the New York City Zoning Resolution necessary to facilitate the proposed project, including regulations relating to height and setback, minimum distance between buildings, and open space ratio.
- Potential financing from City agencies (HPD through the Extremely Low and Low-Income Affordability [ELLA] program and/or the New York City Housing Development Corporation [HDC]) for affordable housing construction.

PURPOSE AND NEED

The purpose of the proposed actions is to facilitate the development of the project site with a new, mixed-use building containing housing (including a substantial amount of affordable housing) and community facility space. The proposed project would provide 169 affordable DUs, which would provide economic benefits to the neighborhood and its residents and advance a citywide initiative to build and preserve 300,000 affordable DUs by 2026 to support low- and middle-income New Yorkers.

In addition, the proposed disposition of the project site would provide revenue to support NYCHA's mission of maintaining and providing affordable housing. A portion of the revenue from the proposed disposition would be reinvested in the Holmes Towers development to address needed maintenance and repairs. The proposed project would redevelop an underutilized site within the Holmes Towers development and provide improved walkways, playgrounds, and landscaping, which would enliven the streetscape within Holmes Towers and along East 92nd Street.

The proposed community facility space would provide recreational space and free or low-cost programming for the surrounding community. In addition, the proposed community facility would provide job opportunities for NYCHA residents. The project sponsor intends to work with NYCHA's Office of Resident Economic Empowerment & Sustainability (REES) to fill positions with NYCHA residents.

FRAMEWORK FOR ANALYSIS

This document has been prepared in accordance with the guidelines presented in the 2014 City Environmental Quality Review (*CEQR*) *Technical Manual*. For each technical area, the analysis includes a description of existing conditions and an assessment of conditions in the future without the proposed project (the "No Action" condition) and the future with the proposed project (the "With Action" condition). For each technical area, a comparison of the No Action condition to the With Action condition provides the basis to determine the potential environmental effects of the proposed project.

EXISTING CONDITIONS

The analysis framework begins with an assessment of existing conditions on the project site and surrounding neighborhood because these can be most directly measured and observed. The assessment of existing conditions does not represent the condition against which the proposed project is measured, but generally serves as a starting point for the projection of No Action and With Action conditions and the analysis of project impacts.

FUTURE WITHOUT THE PROPOSED PROJECT

In the No Action condition the proposed actions are not approved, the proposed project would not be constructed, and the project site would remain as is under the existing conditions. For each technical analysis, planned or proposed development projects within the appropriate study area that are likely to be completed by the 2021 analysis year are considered.

PROBABLE IMPACTS OF THE PROPOSED PROJECT

The identification of potential environmental impacts is based upon the comparison of the No Action condition to the With Action condition. This Environmental Assessment Statement (EAS) assesses the potential effects of the incremental difference of 339 DUs (169 affordable DUs) and approximately 12,300 gsf of community facility space. In certain technical areas (e.g., traffic, air quality, and noise) this comparison can be quantified and the severity of impact rated in accordance with the *CEQR Technical Manual*. In other technical areas, (e.g., neighborhood character) the analysis is qualitative in nature. The methodology for each analysis is presented at the start of each technical analysis. As summarized below and in the attachments to this EAS, the proposed project would not result in any significant adverse impacts.

B. SCREENING ANALYSES

All analyses were performed in accordance with the guidance contained in the *CEQR Technical Manual*.

LAND USE, ZONING, AND PUBLIC POLICY

See Attachment B, “Land Use, Zoning, and Public Policy.”

SOCIOECONOMIC CONDITIONS

See Attachment C, “Socioeconomic Conditions.”

COMMUNITY FACILITIES AND SERVICES

See Attachment D, “Community Facilities and Services.”

OPEN SPACE

See Attachment E, “Open Space.”

SHADOWS

See Attachment F, “Shadows”

HISTORIC AND CULTURAL RESOURCES

See Attachment G, “Historic and Cultural Resources.”

URBAN DESIGN AND VISUAL RESOURCES

See Attachment H, “Urban Design and Visual Resources.”

NATURAL RESOURCES

Natural Resources are defined in the *CEQR Technical Manual* as (1) the City’s biodiversity (e.g., plants, wildlife, and other organisms); (2) any aquatic or terrestrial areas capable of providing suitable habitat to sustain the life processes of plants, wildlife, and other organisms; and (3) any areas capable of functioning in support of the ecological systems that maintain the City’s environmental stability. Under CEQR, a natural resources assessment considers species in the context of the surrounding environment, habitat, or ecosystem and examines a project’s potential to impact those resources.

VEGETATION AND WILDLIFE

The approximately 0.49-acre project site is currently occupied by paved walkways, grassed areas, and playgrounds serving the Holmes Towers development.

Based on examination of the existing conditions site survey¹ and site photos, the project site contains 17 existing trees, mostly mature London plane trees (*Platanus acerifolia*), ranging in diameter from 8–28 inches. In addition, 7 street trees border the project site on City property along the 92nd Street sidewalk—all honey locust (*Gleditsia triacanthos*) trees ranging in diameter from 4–12 inches.

The New York State Department of Environmental Conservation (NYSDEC) Breeding Bird Atlas (BBA) collected data on bird species breeding throughout the State between 2000 and 2005. Within the BBA Census Block 5851C, which incorporates the project site and covers all of Midtown Manhattan and most of Central Park, a total of 43 species of birds were confirmed or possible/probably breeding. Of these only one species, the peregrine falcon (*Falco peregrinus*), is listed by NYSDEC under its endangered species program. As discussed below, the peregrine falcon is not known to occur on the project site or vicinity and was not listed in the New York Natural Heritage Program’s (NYNHP) response. Urban-tolerant birds that can be expected to utilize the project site frequently include pigeon (*Columba livia*), house sparrow (*Passer domesticus*), American crow (*Corvus brachyrhynchos*), blue jay (*Cyanocitta cristata*), European starling (*Sturnus vulgaris*), and others.

The NYSDEC’s Amphibian and Reptile Atlas Project (Herp Atlas) collected data on species sightings from 1990–1999. Within the United States Geological Survey (USGS) Central Park 7.5-minute quadrangle that includes the project site and most of Manhattan and the Bronx, the northern red-backed salamander (*Plethodon c. cinereus*), green frog (*Rana clamitans*), bullfrog (*Rana catesbeiana*), eastern box turtle (*Terrapene c. carolina*), red-eared slider (*Trachemys scripta elegans*), painted turtle (*Chrysemys picta*), Italian wall lizard (*Podarcis sicula*), common garter snake (*Thamnophis sirtalis*), and northern brown snake (*Storeria dekayi*) were found. It is unlikely that any of these species of reptiles and amphibians occurs on the project site due to lack of

¹ True North Surveyors, P.C. of Holmes Towers Block 1573 Lot 20 (11.2.17).

appropriate habitat. The site offers no aquatic habitat, and no areas of unmaintained vegetation in which these species could take refuge in the urban context of Manhattan.

Mammals that can be expected to frequent the project site are urban-tolerant species, including grey squirrel (*Sciurus carolinensis*), Norway rat (*Rattus norvegicus*), raccoon (*Procyon lotor*), house mouse (*Mus musculus*), opossum (*Didelphis virginiana*), and others.

The proposed project would require removal of approximately 17 existing mature London plane trees from the project site. These trees are not subject to New York City Department of Parks and Recreation (NYC Parks) jurisdiction (i.e., they are not in the public right-of-way or on land mapped as City parkland). This tree loss would be unavoidable but would be offset with the provision of new landscaping as part of the proposed project, including approximately 40 new trees as shown in **Figure A-2**.

During construction, street trees fronting the project site along 92nd Street would be protected by fencing and measures approved by the NYC Parks Forestry Department.

The proposed project would not result in significant adverse impacts to mammals, reptiles, or amphibians. Mammals that may be expected to occur on the project site are all human-subsidized and common species, such as Norway rat and grey squirrel. The small reduction in lawn and trees as a result of the proposed project is not expected to cause a significant reduction in their numbers.

Regarding birds, the construction of high rise structures may result in bird mortality due to bird collisions with clear and/or reflective glass. While birds are known to collide at night with tall artificial structures, such as buildings, the overwhelming majority of bird collisions with buildings occur during the daytime when lower story windows reflect images of nearby trees and other vegetation (Gelb and Delectetaz 2009, Klem et al. 2009). Night time collisions of birds with artificial structures are related to structure height (Kerlinger 2000). Most birds migrate at altitudes of 656 to 2,461 feet (Able 1970, Mabee et al. 2006) and rarely fly below 295 feet during clear weather (Mabee and Cooper 2004).

At approximately 530 feet in height, the proposed project's building would not extend into the air space commonly used by migrating birds. Therefore, losses due to collision with lower stories of the proposed building on the project site would not result in significant adverse impacts to birds. Furthermore, the building's design may include measures recommended by the New York City Audubon (NYCA 2007) and the American Bird Conservancy (Sheppard and Phillips 2011) to reduce the likelihood of daytime collisions of birds with windows on the lower stories. These measures may include (1) reduced usage of glass relative to other building materials on the building's façade, (2) usage of low reflectivity glass, (3) fritting of glass surfaces, and (4) not placing shrubs and trees in close proximity to reflective surfaces.

WETLANDS AND FLOODPLAINS

The project site contains no wetlands and none of the following:

- United States Fish and Wildlife Services (USFWS) National Wetlands Inventory (NWI) mapped wetlands;
- NYSDEC-mapped freshwater (Article 24 of the ECL, 6NYCRR PART 663 et seq.); and
- NYSDEC-mapped tidal wetlands (Article 25 of the ECL, 6NYCRR PART 661).

Therefore, the proposed project would not result in significant adverse impacts to wetlands.

The project site is within the New York City Waterfront Revitalization Program's (WRP) Coastal Zone and is within the Federal Emergency Management Agency (FEMA) Preliminary Flood Insurance Rate Maps (FIRM) Zone "X" (500-year floodplain). By the 2050s, the project site would be within the 100-year floodplain as projected by the New York City Panel on Climate Change (Horton et al 2015).

Regarding potential flooding impacts to surrounding properties, the floodplain adjacent to the project site is affected by coastal flooding only and would not be affected by construction or regrading/filling of the floodplain as could occur within a riverine floodplain. Coastal floodplains are influenced by astronomic tide and meteorological forces, e.g., northeasters and hurricanes (FEMA 2013) and not by fluvial flooding. Additional development within the floodplain would have no effect on the flooding heights from the tidal East River. Therefore, the proposed project would not result in adverse impacts to the 100-year floodplain or result in additional flooding to properties adjacent to the project site.

SOILS AND TOPOGRAPHY

The project site is described pursuant to the New York City Reconnaissance Soil Survey as "101. Pavement and Buildings, wet substratum-LaGuardia-Ebbets complex, 0 to 8 percent slopes." These are nearly level to gently sloping urbanized areas filled with a mixture of natural soil materials and construction debris over swamp, tidal marsh, or water; a mixture of anthropogenic soils, which vary in coarse fragment content, with up to 80 percent impervious pavement and buildings covering the surface.

The Natural Resources Conservation Service (NRCS) Web Soil Survey maps the project site as "ULA: Urban land-LaGuardia complex, 0 to 3 percent slopes" soil mapping unit. The typical profile of Urban Land soil is 0–15 inches of cemented material underlain by 15–79 inches of gravelly sandy loam (human transported fill material). The typical profile of LaGuardia soil is 0–8 inches of cobbly artificial coarse sandy loam over 8–79 inches of very cobbly artificial coarse sandy loam. The depth to the water table of the ULA soil mapping unit is listed as greater than 200 centimeters. NRCS does not provide drainage class or hydrologic soil group rates for urban land soil due to the variability of fill material and conditions.

These soils do not constitute a valuable resource, for agricultural or construction materials, nor do they support an existing ecological resource, such as hydric soils sustaining a wetland. Therefore, the necessary disturbance to the onsite soils to build the foundation for the proposed project would not disturb a valuable soil resource.

Topography is level across the site and it is at an elevation of approximately 14.0 feet (NAVD88). Owing to the level topography of the project site, the potential for migration of sediment offsite and any runoff-related impacts to water quality is very low. Erosion control measures would be implemented during construction as required by the New York City Building Code, the General State Pollutant Discharge Elimination System (SPDES) Permit for Construction Activities (GP-0-15-002), and the New York State Standards and Specifications for Erosion and Sediment Control.

THREATENED AND ENDANGERED SPECIES

The NYSDEC's Environmental Resource Mapper indicates the project site is within an area with the potential for rare plants or animals based on past records of occurrence. An information request letter was submitted to NYNHP to verify this designation and to determine the specific species known for the project site or vicinity. The response from the NYNHP, dated December 6, 2017,

indicates that they have no records of rare or state-listed animals, plants, or significant natural communities at the project site or vicinity. This correspondence is included in **Appendix A**.

USFWS Information for Planning and Consultation (IPaC) indicates no federally listed species or critical habitats are known or expected to be located on or near the project site. IPaC does report two Birds of Conservation Concern² (BCC) potentially occurring near the project site—the bridled tern (*Onychoprion anaethetus*) and red-throated loon (*Gavia stellata*). These are both coastal-dependent bird species that would not occur and/or nest within the project site.

Peregrine falcon has been identified within Manhattan where it has occasionally nested on bridges or tall buildings. The location of peregrine falcon nests are well known by NYSDEC and USFWS personnel and are included in NYNHP information requests. No peregrine falcons were reported on or near the project site by the NYNHP. Therefore, the proposed project would have no adverse impacts to threatened and endangered species.

HAZARDOUS MATERIALS

See Attachment I, “Hazardous Materials.”

WATER AND SEWER INFRASTRUCTURE

According to the *CEQR Technical Manual*, an assessment of water supply is warranted if a project would result in an exceptionally large demand for water (i.e., more than 1 million gallons per day [gpd]) or would be located in an area that experiences low water pressure (e.g., the Rockaway Peninsula or Coney Island). An assessment of the wastewater and stormwater conveyance and treatment system is warranted if a project is located in a combined sewer area of Manhattan and would result in incremental development of 1,000 or more DUs or 250,000 sf of commercial, public facility, institutional, and/or community facility space. The proposed project does not exceed these thresholds for analysis. Therefore, no further analysis is required, and the proposed project would not result in significant adverse impacts to water and sewer infrastructure.

SOLID WASTE AND SANITATION SERVICES

The *CEQR Technical Manual* states that few projects generate substantial amounts of solid waste (50 tons a week or more) that would have the potential to result in a significant adverse impact to solid waste and sanitation services. The proposed project would generate approximately 7 tons of solid waste per week, which would be less than the *CEQR Technical Manual* threshold of 50 tons per week requiring additional analysis. Therefore, no further analysis is required. The proposed project would not result in any significant adverse impacts to solid waste and sanitation services.

ENERGY

According to the *CEQR Technical Manual*, a detailed assessment of energy impacts would be limited to actions that could significantly affect the transmission or generation of energy or that generate substantial consumption of energy. The proposed project would be served by available energy suppliers, and is not expected to generate a substantial demand for energy. Therefore, no

² BCC are migratory nongame birds identified by the USFWS that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973.

further analysis is required, and the proposed project would not result in significant adverse impacts to the consumption or supply of energy.

TRANSPORTATION

See Attachment J, “Transportation.”

AIR QUALITY

See Attachment K, “Air Quality.”

GREENHOUSE GAS EMISSIONS

Increased greenhouse gas (GHG) emissions are changing the global climate, which is predicted to lead to wide-ranging effects on the environment, including rising sea levels, increases in temperature, and changes in precipitation levels. The *CEQR Technical Manual* typically requires an assessment of a project’s GHG emissions and its consistency with the City’s policy to reduce GHG emissions only if warranted by specific characteristics of the project (e.g., proposing new power generation, significantly affecting the City’s solid waste management system, or conducting an environmental impact statement for a project that would result in more than 350,000 sf of incremental development). The proposed project does not meet any of these thresholds for analysis, and therefore it would not result in significant GHG emission impacts.

NOISE

See Attachment L, “Noise.”

PUBLIC HEALTH

The proposed project would not result in any significant unmitigated adverse impacts to air quality, water quality, hazardous materials, noise, or any other CEQR analysis area. Therefore, no further analysis of public health is required, and no significant adverse impacts to public health are expected to occur as a result of the proposed project.

NEIGHBORHOOD CHARACTER

According to the *CEQR Technical Manual*, neighborhood character is considered to be an amalgam of the various elements that define a neighborhood’s distinct personality. These elements may include a neighborhood’s land use, urban design, visual resources, historic resources, socioeconomics, traffic, and/or noise. An assessment of neighborhood character is generally needed when a proposed project has the potential to result in significant adverse impacts in any of the technical areas listed above, or when the proposed project may have moderate effects on several of the elements that define a neighborhood’s character. As discussed above and in the attachments to this EAS, the proposed project would not have significant adverse impacts to or result in any moderate effects in these technical areas related to neighborhood character. Therefore, the proposed project would not result in any significant adverse neighborhood character impacts and a detailed neighborhood character analysis is not warranted.

CONSTRUCTION

See Attachment M, “Construction.”

C. REFERENCES

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✱

A. INTRODUCTION

As described in Attachment A, “Project Description and Screening Analyses,” the proposed actions would facilitate the development of a mixed-use residential and community facility building (the “proposed project”) at a site on the northern side of East 92nd Street between First and York Avenues (a portion of Block 1573, Lot 20; the “project site”) in the Yorkville neighborhood of Manhattan, Community District 8. This attachment assesses the potential impacts of the proposed project on land use, zoning, and public policy in the future with the proposed project (the “With Action” condition) as compared to conditions in the future without the proposed project (the “No Action” condition). As described below, the assessment concludes that the proposed project would be compatible with existing land use in the surrounding area, and would not result in any significant adverse impacts to land use, zoning, or public policy.

B. METHODOLOGY

In accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, the analysis of land use, zoning, and public policy assesses the area within 400 feet of the project site, which is where the proposed project could reasonably be expected to cause potential effects. The land use study area is generally bounded by East 94th Street to the north, Franklin D. Roosevelt (FDR) Drive and York Avenue to the east, East 91st Street to the south, and First Avenue to the west.

The analysis characterizes existing conditions in the study area in terms of land use, zoning, and public policy and evaluates land use, zoning, and public policy in the No Action condition and probable impacts of the proposed project in With Action condition.

Various sources were used to comprehensively analyze the land use, zoning, and public policy characteristics of the study area, including field surveys, land use and zoning maps, and online sources from the New York City Department of City Planning (DCP) and the New York City Department of Buildings (DOB).

C. EXISTING CONDITIONS

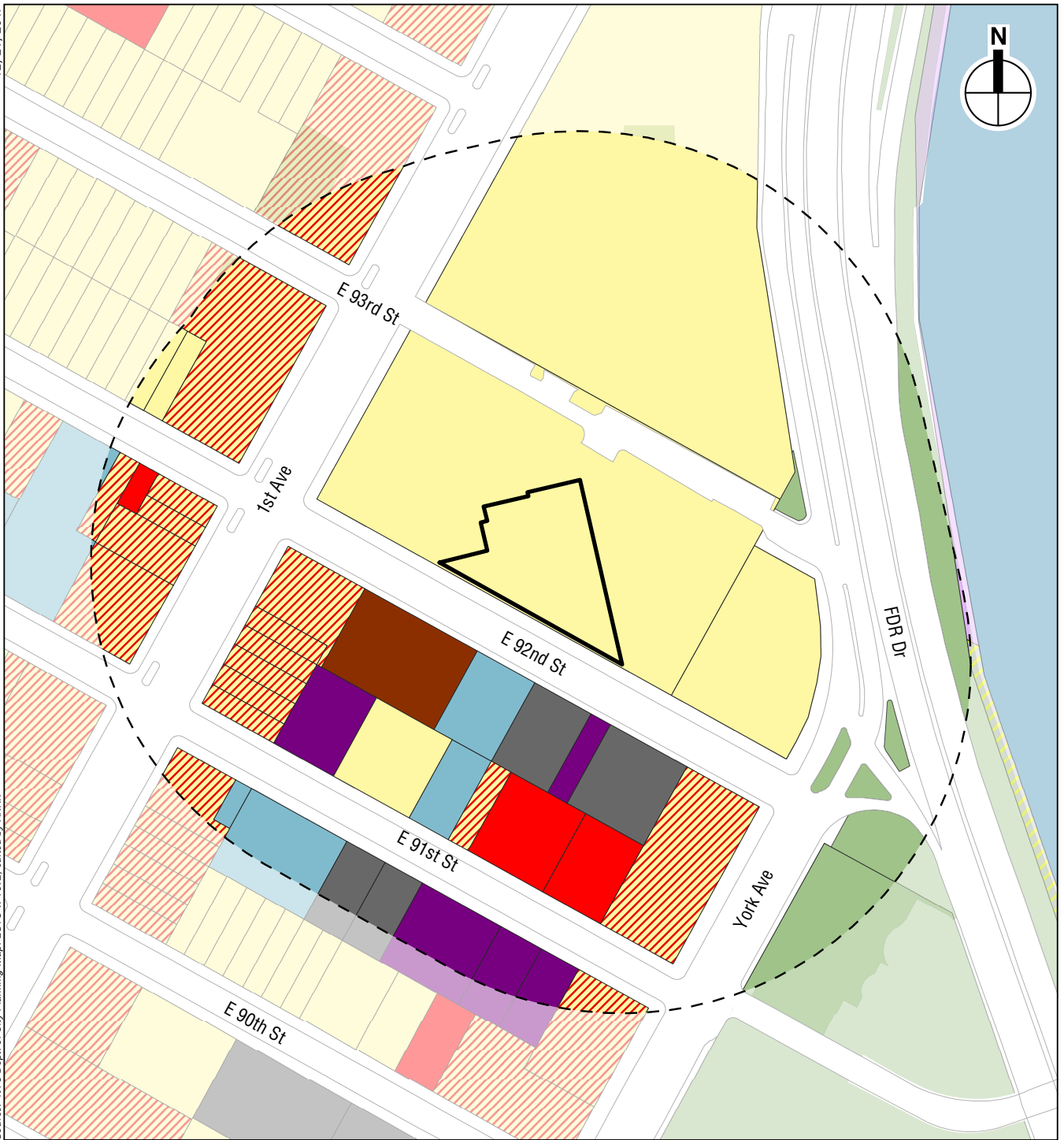
LAND USE

PROJECT SITE

The project site is located along the northern side of East 92nd Street between First and York Avenues on an underutilized portion of the New York City Housing Authority (NYCHA) John Haynes Holmes Towers development (the “Holmes Towers development”) (see **Figure B-1**). The project site contains landscaping, walkways, and two play areas serving the Holmes Towers development.

12/21/2017

Source: NYC Dept. of City Planning MapPLUTO v. 16v2, edited by AKRF



- | | |
|-----------------------------------|------------------------------------|
| Project Site | Parking Facilities |
| Study Area (400-foot boundary) | Public Facilities and Institutions |
| Commercial and Office Buildings | Residential |
| Hotels | Residential with Commercial Below |
| Industrial and Manufacturing | Transportation and Utility |
| Open Space and Outdoor Recreation | Under Construction |

0 200 FEET

BELLWETHER AT YORKVILLE

Existing Land Use
Figure B-1

EXISTING CONDITIONS

The 400-foot study area contains predominantly residential and commercial uses, and a mix of community facility, manufacturing, and open space uses.

Residential buildings range from five-story multifamily walkup buildings located on midblock sites to larger high-rise multifamily elevator buildings located along York and First Avenues. Two NYCHA developments are also located within the study area: the Holmes Towers development (two towers) surrounding the project site on three sides and the Stanley M. Isaacs Houses (three towers) located directly north of the project site. The Holmes Towers development surrounding the project site consists of two 25-story buildings containing 537 dwelling units (DUs), community facility uses, surface parking, walkways, landscaping, and play areas. There is also a market-rate residential building located within the Holmes Tower development block at East 92nd Street and York Avenue.

Commercial uses within the study area include ground-floor retail uses along First and York Avenues and individual commercial buildings on East 91st and East 92nd Streets. The ground-floor retail uses include a mix of restaurants, convenience stores, and other neighborhood services. A Courtyard by Marriott Hotel is located directly south of the project site across East 92nd Street.

Community facility and institutional uses within the study area include an American Society for the Prevention of Cruelty to Animals (ASPCA) adoption center directly south of the project site at 424 East 92nd Street, the Gillen Brewer School directly south of the project site in the base of the Courtyard Marriott Hotel, the Association to Benefit Children's Cody Gifford House located south of the project site at 404 East 91st, the Convent of the Sacred Heart School of New York's recently completed Athletics and Wellness Center located at 406 East 91st Street, the Asphalt Green recreation center located southeast of the project site at 555 East 90th Street, and the East Side Middle School (MS 114) located west of the project site at 331 East 91st Street.

Other uses within the study area include parking, light manufacturing, and open space. Parking uses are found on the south sides of East 91st and 92nd Streets. Surface parking uses are provided along East 93rd Street between the Holmes Towers development and the Stanley M. Isaacs Houses. Light manufacturing uses, such as a wholesale bakery, are located on East 91st Street and East 92nd Street. There are two open spaces within the study area: DeKovats Playground, located east of the project site on York Avenue between East 91st and East 92nd Streets; and the East River Esplanade, a portion of which is currently being reconstructed, located along the East River to the east and north of the project site.

ZONING

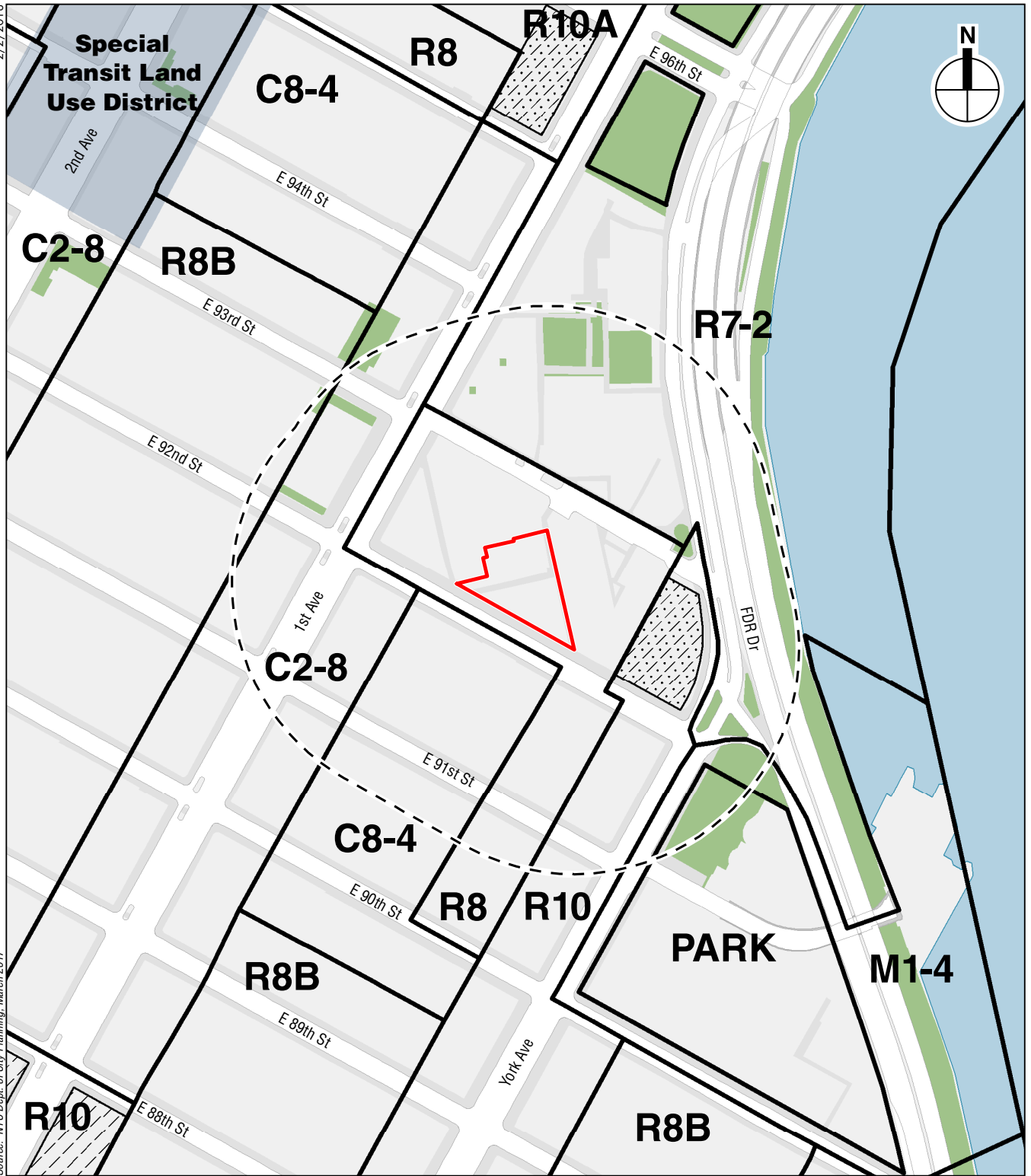
PROJECT SITE

As shown in **Figure B-2**, the project site is located in an R8 zoning district. R8 zoning districts are high-density residential zoning districts prevalent in dense neighborhoods throughout New York City, and Manhattan in particular.

New development in R8 zoning districts may proceed under either Height Factor or Quality Housing bulk regulations. Under Height Factor bulk regulations the residential floor area ratio (FAR) ranges from 0.94 to 6.02, and is dependent on the amount of open space provided on the zoning lot (the open space ratio, or OSR). There are no height limits, but the building envelope must be within a sky exposure plane. In R8 zoning districts the sky exposure plane begins at a height of 85 feet above street level before sloping inwards over the zoning lot. The maximum residential FAR for R8 buildings developed under Quality Housing bulk regulations is 6.02 for zoning lots on narrow and

2/2/2018

Source: NYC Dept. of City Planning, March 2017



- Project Site
- Study Area (400-foot boundary)
- Zoning Districts
- Special Purpose District
- C1-5 Commercial Overlay District
- C2-5 Commercial Overlay District

wide streets within the Manhattan Core (south of 96th Street on the East Side). The minimum and maximum base heights before a setback are 60 and 85 feet, and the maximum permitted building height is 115 feet for zoning lots or portions thereof on a narrow street beyond 100 feet of a wide street, and 120 feet for zoning lots or portions thereof within 100 feet of a wide street. Parking requirements are waived under both types of bulk regulations.

STUDY AREA

The study area contains seven other types of zoning districts: R7-2, R8B, and R10 residential zoning districts; C2-5, C2-8, and C8-4 commercial overlays and zoning districts; and an M1-4 light manufacturing zoning district.

Residential Zoning Districts

An R7-2 district is located to the north of the project site. R7-2 zoning districts are medium-density residential districts mapped throughout the City. Like R8 zoning districts, development may proceed under either Height Factor or Quality Housing bulk regulations. Under Height Factor bulk regulations FAR ranges from 0.87 to 3.44 depending on the OSR and heights are governed by the sky exposure plane which begins at a height of 60 feet before sloping inwards. Under Quality Housing bulk regulations maximum FAR is 3.44, minimum and maximum base height before a setback is 40 to 65 feet, and maximum permitted height is 75 feet.

An R8B zoning district is located to the west of the project site. R8B zoning districts are high-density contextual residential zoning districts. These districts are intended to represent brownstone row houses and are commonly found on the Upper East Side and Upper West Side of Manhattan. Maximum FAR is 4.0, minimum and maximum base height before a setback is 55 to 65 feet, and the maximum permitted height is 75 feet.

An R10 zoning district is located to the southeast of the project site. R10 zoning districts are high-density residential districts mapped predominantly in Manhattan. Buildings may be developed under either Quality Housing or Tower bulk regulations. Under Quality Housing bulk regulations the maximum FAR is 10.0, minimum and maximum base height before a setback is 60–125 feet to 125–155 feet depending on if the building is located on a narrow or wide street, and maximum heights are 185 to 210 feet also depending on if the building is located on a narrow or wide street. Under Tower bulk regulations the maximum FAR is 10.0, minimum and maximum base height before a setback is 60 to 85 feet, and maximum heights are governed by the percentage of lot coverage of the tower portion that penetrates the sky exposure plane, beginning at 85 feet.

Parking requirements are waived under all types of bulk regulations for these R7-2, R8B, and R10 zoning districts.

Commercial Overlays and Zoning Districts

A C2-5 overlay is located directly east of the project site. C2-5 overlays are commercial overlays mapped within residential districts, permitting commercial uses on the lower floors of residential buildings. C2-5 overlays have a maximum commercial FAR of 2.0 (for zoning lots containing only commercial uses) when mapped in R6–R10 residential districts. Commercial uses must be located below the residential uses.

A C2-8 zoning district is located along First Avenue to the west of the project site. C2-8 commercial districts function similarly to the commercial overlays described above, with a residential district equivalent of R10, and are mapped in areas that are predominately residential

Bellwether at Yorkville

in character such as along the major avenues of the Upper East Side. They have a maximum commercial FAR of 2.0 and parking is not required.

A C8-4 zoning district is mapped to the south of the project site. C8-4 zoning districts are commercial districts mapped for commercial uses that require a large amount of land, often found along major arteries, and the maximum commercial FAR is 5.0.

Manufacturing Districts

An M1-4 zoning district is mapped to the southeast of the project site. M1-4 zoning districts are light manufacturing districts mapped throughout the city. Uses must meet stringent M1 performance standards and the maximum manufacturing FAR is 2.0.

Table B-1 lists the zoning districts in the study area and their descriptions.

Table B-1
Zoning Districts Located in the Study Area

Zoning District	Maximum FAR ¹	Uses/Zone Type
R7-2	3.44 residential 6.5 community facility	Medium-density residential district
R8	6.02 residential 6.5 community facility	High-density residential district
R8B	4.0 residential 4.0 community facility	High-density contextual residential district
R10	10.0 residential 10.0 community facility	High-density residential district
C2-5	2.0 commercial	Commercial overlay mapped in residential districts
C2-8	2.0 commercial 10.0 residential	Commercial district mapped in predominately residential areas
C8-4	5.0 commercial 6.5 community facility	Commercial district intended for land intensive uses
M1-4	2.0 manufacturing 2.0 commercial 6.5 community facility	Light manufacturing district
Notes: ¹ FAR is a measure of density establishing the amount of development allowed in proportion to the lot area. For example, a lot of 10,000 square feet (sf) with a FAR of 1 has an allowable building area of 10,000 sf. The same lot with an FAR of 10 has an allowable building area of 100,000 sf. Source: <i>New York City Zoning Resolution.</i>		

PUBLIC POLICY

HOUSING NEW YORK: A FIVE-BOROUGH, TEN-YEAR PLAN

On May 5, 2014, the de Blasio administration released *Housing New York: A Five-Borough, Ten-Year Plan* (*Housing New York*), a plan intended to build and preserve 200,000 affordable DUs over the coming decade to support New Yorkers with a range of incomes. To achieve this goal, the plan aims to double the New York City Department of Housing Preservation and Development's (HPD) capital budget, target vacant and underused land for new development, protect tenants in rent-regulated apartments, streamline rules and processes to unlock new development opportunities, contain costs, and accelerate affordable construction. The plan details the key policies and programs for implementation, including developing affordable housing on

underused public and private sites. In October 2017, the de Blasio administration announced that the target of building and protecting 200,000 affordable DUs would be achieved by 2022, and increased the goal to 300,000 DUs by 2026.

ONENYC

In April 2015, the de Blasio administration released OneNYC, a plan for growth, sustainability, resiliency, and equity. OneNYC is the update for the sustainability plan started under the Bloomberg administration, previously known as *PlaNYC 2030: A Greener, Greater New York*. While OneNYC still centers on growth, sustainability, and resiliency, the de Blasio administration added equity as a core principle to address the high poverty rate and rising income inequality. The new plan also addresses pressing issues such as population growth, aging infrastructure, and global climate change. This plan is being fulfilled through multiple programs and initiatives, such as creating and preserving affordable housing.

NEXT GENERATION NYCHA

NextGeneration NYCHA is a 10-year strategic plan released by NYCHA in May of 2015 to preserve and protect public housing for current residents and in the future. Goals include (1) achieving short-term financial stability and diversify funding for the long term; (2) operating as an efficient and effective landlord; (3) (re)building, expanding, and preserving public and affordable housing stock; and (4) developing the best-in-class resident services and resident engagement models. One of the strategies to achieve goal (3) is the provision of underutilized NYCHA-owned land to support the creation of affordable DUs.

FOOD RETAIL EXPANSION TO SUPPORT HEALTH (FRESH) PROGRAM

The FRESH program promotes the establishment and expansion of grocery stores in underserved communities through financial and zoning incentives for developers. These incentives include tax reductions, sales tax exemptions, additional development rights, and reductions in required parking. The project site is located in an area designated under the FRESH program as eligible for only discretionary tax incentives.

WATERFRONT REVITALIZATION PROGRAM

The project site is located within the Coastal Zone, and therefore is subject to the policies and provisions of the Waterfront Revitalization Program (WRP), see **Figure B-3**. The WRP establishes the City's policies for waterfront planning, preservation, and development projects to ensure consistency over the long term.

D. FUTURE WITHOUT THE PROPOSED PROJECT

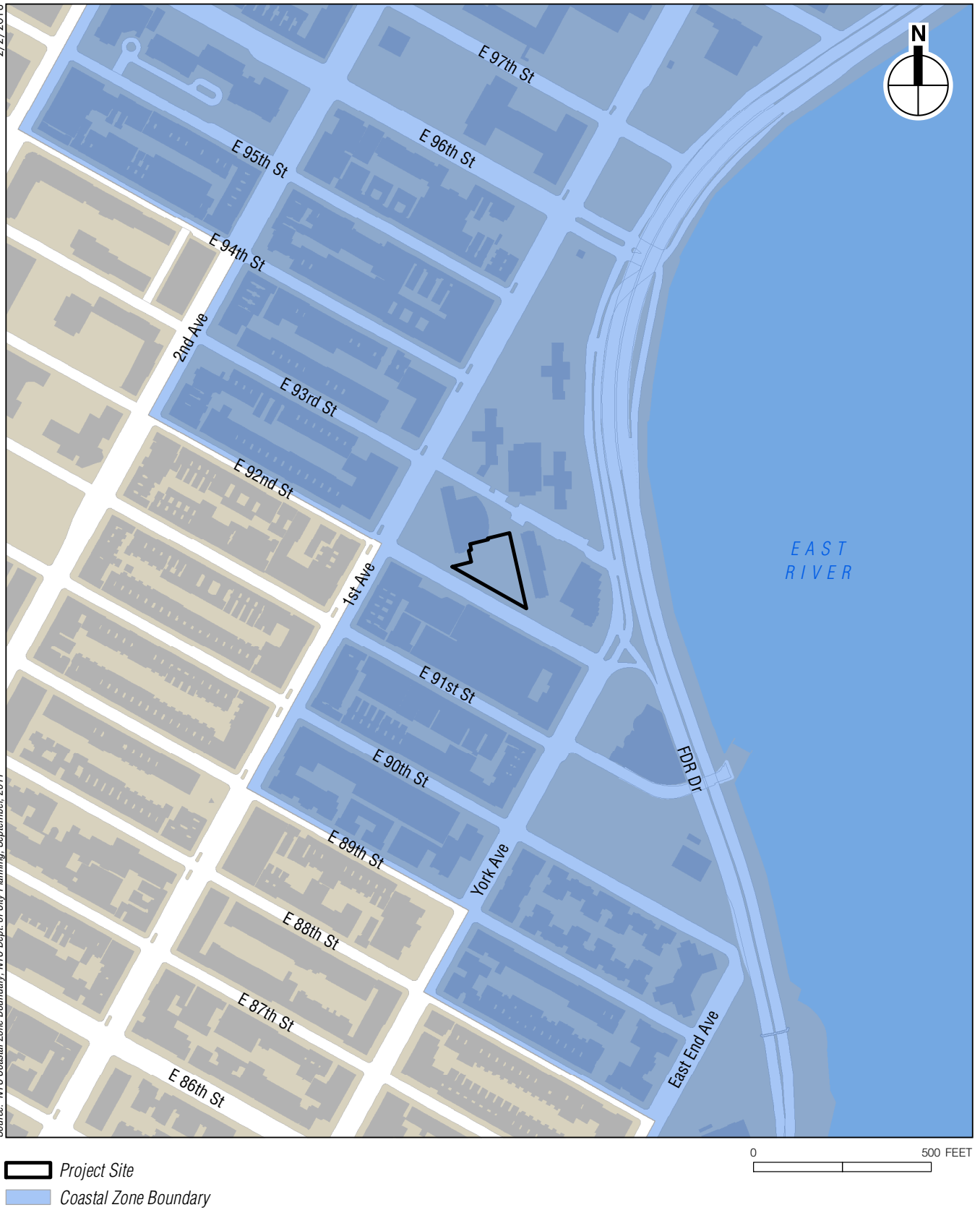
LAND USE

PROJECT SITE

In the No Action condition, the project site is expected to remain in its existing condition and no new development on the project site would occur.

2/2/2018

Source: NYC Coastal Zone Boundary, NYC Dept. of City Planning, September, 2011



Project Location within the Coastal Zone
Figure B-3

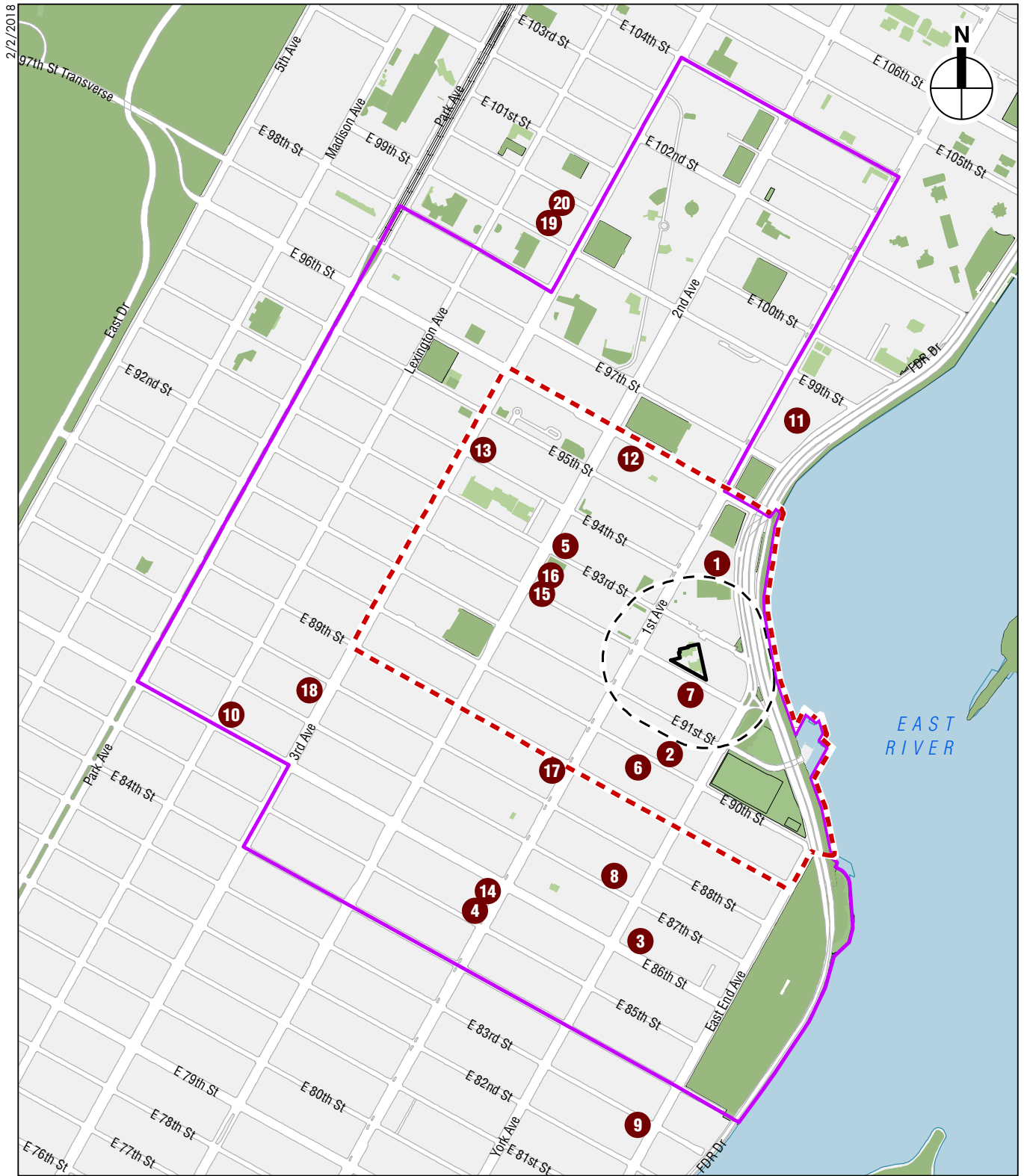
STUDY AREA

Current trends and conditions within the study area are expected to continue in the No Action condition. As shown in **Table B-2** and **Figure B-4**, there is one background development project that is currently anticipated to be completed by the 2021 analysis year within the land use study area. This no build project is a new storage facility at 428 East 92nd Street.

Outside of the 400-foot land use study area, but within the approximately ¼-mile and ½-mile socioeconomic and open space study areas (see Attachment C, “Socioeconomic Conditions” and Attachment E, “Open Space”), there are several additional No Build projects proposed or planned and assumed to be completed and occupied by the 2021 analysis year as shown in **Table B-2**.

Table B-2
No Build Projects

Map ID No. ¹	Project Name/Address	DUs	Retail sf	Office sf	Community Facility sf	Industrial sf	Parking	Build Year
Land Use Study Area (400-Foot Radius)								
7	428 East 92nd Street					35,790		2021
Land Use Study Area Total		0	0	0	0	35,790	0	0
Socioeconomic Study Area (Census Tracts 152, 154, and 156.01)								
1	1828 First Avenue ²							2021
2	427 East 90th Street	21						2021
5	1802 Second Avenue	215						2021
6	412 East 90th Street				51,805			2021
12	302 East 96th Street	48					8	2018
13	1681 Third Avenue	104	13,225					2018
15	1766 Second Avenue	20	1,763					2018
16	1768 Second Avenue	5	1,913					2018
Socioeconomic Study Area Total		413	16,901		51,805	35,790	8	
Open Space Study Area (Census Tracts 144.01, 144.03, 146.01, 146.02, 148, 152, 154, 156.01, 156.02, 158.01, 158.02, and 164)								
3	511 East 86th Street	140	2,263					2021
4	1639 First Avenue	27	1,983					2021
8	441 East 87th Street	5						2021
10	147 East 86th Street	63		26,718				2021
14	1647 First Avenue	38	1,950					2021
17	360 East 89th Street	84	3,265					2018
18	1558 Third Avenue	48	52,221		753			2018
Open Space Study Area Total (includes all no build projects within the Socioeconomic Study Area)		818	78,583	26,718	52,558	35,790	8	
Additional Projects within ½-Mile of the Project Site								
9	590 East 83rd Street				73,461			2021
11	1912 First Avenue	153			650			2021
19	166 East 100th Street	12			10,060			2018
20	168 East 100th Street	16						2018
Total Within ½-Mile of Project Site³		999	78,583	26,718	136,729	35,790	8	
Notes:								
¹ See Figure B-4 for corresponding map ID numbers								
² This project is a two-story accessory utility building for the NYCHA's Stanley M. Isaacs Houses development.								
³ Including all census tract based study areas								
Projects for which the build year is unknown are assumed to be complete by the proposed project's 2021 build year.								
Sources:								
DOB, Building Information System (BIS); media coverage of new development projects; DCP.								



- Project Site
- Study Area (400-foot boundary)
- Socioeconomic Study Area Boundary
- Open Space Study Area
- 1 No Build Project

0 500 FEET

In total, approximately 1,000 DUs are anticipated to be added within ½-mile of the project site by the 2021 analysis year.

ZONING AND PUBLIC POLICY

There are no changes to zoning or public policy expected on the project site, or in the study area by 2021 in the No Action condition.

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

LAND USE

PROJECT SITE

The proposed actions would facilitate the development of a mixed-use residential and community facility building on the project site.

The proposed project would change the land use of the project site by removing the existing landscaping, walkways, and play areas and introducing residential and community facility uses. The proposed project would also make walkway and landscaping improvements within the Holmes Towers development and would construct new play areas to replace the existing play areas within the project site.

The proposed project would have a positive effect on land use by activating underutilized space in the Holmes Towers development and providing affordable housing and community facility uses to serve the surrounding community. As discussed below, the proposed project is not expected to result in adverse land use effects on adjoining uses or be incompatible with uses in the study area. It would be consistent with the residential uses in the study area. Overall, the proposed project would not result in significant adverse land use impacts on the project site.

STUDY AREA

The proposed project's residential and community facility uses would be consistent with land uses in the study area, which contains predominantly residential and retail uses. The proposed project would provide high-density residential uses that would be compatible with existing residential uses in the study area. Numerous community facilities are also located within the study area, including an existing Asphalt Green facility southeast of the project site. The proposed project would provide affordable housing for the community, and the community facility space would provide additional recreational space for the surrounding community. Overall, the proposed project would not adversely affect the land use character of the study area and would not result in significant adverse land use impacts or significant adverse zoning impacts in the study area.

ZONING

PROJECT SITE

The proposed project would be located within an R8 residential zoning district on a portion of NYCHA's John Haynes Holmes Towers development site, which includes two existing buildings; accordingly, the proposed project's size, massing, design and location are constrained by these existing buildings. The proposed project would be located within the same zoning lot as the NYCHA Holmes Towers development and would utilize development rights generated by this zoning lot. In order to develop the proposed project, mayoral zoning overrides of certain sections of the New York

City Zoning Resolution related to height and setback, minimum distance between buildings, and open space ratio are being requested. These discretionary actions would require Mayoral approval and would only affect the project site. The zoning overrides would enable the proposed project to provide the maximum number of affordable units and supporting uses within the proposed project.

STUDY AREA

The proposed project would not affect zoning in the study area, and would be consistent with the predominantly residential and commercial zoning districts that currently existing in the study area. Overall, the proposed project would not result in significant adverse zoning impacts in the study area.

PUBLIC POLICY

HOUSING NEW YORK

As noted above, a major public policy goal in the City is to build or preserve 300,000 affordable DUs. The proposed project would help to achieve that goal by creating approximately 169 additional affordable DUs by 2021. This represents an increment of 169 DUs over the No Action condition. Therefore, the proposed project would be consistent with this policy.

ONENYC

The mission of OneNYC is a plan for growth, sustainability, resiliency, and equity. The proposed project would introduce new residential DUs in an area with excellent mass transit access, and would also introduce new community facility uses to the area. The proposed project would develop underutilized space within the existing NYCHA Holmes Towers development to provide more affordable housing and revenue to support NYCHA's affordable housing mission. Therefore, the proposed project would be consistent with OneNYC's goals for growth, sustainability, and equity.

NEXTGENERATION NYCHA

The NextGeneration NYCHA plan to preserve and protect public housing for current residents would be furthered by the proposed project. In particular the proposed project would advance Goal (3) (re)building, expanding, and preserving public and affordable housing stock, through Strategy (10) of the NextGeneration NYCHA plan. This strategy seeks to provide underutilized NYCHA-owned land to support the creation of affordable DUs. The project site is underutilized NYCHA-owned property, and the proposed project would develop it under the 50 percent Affordable Housing and 50 percent Market Rate Housing program outlined in the NextGeneration NYCHA plan. Fifty percent of the proposed project's DUs would be affordable under these requirements (169 affordable DUs). The proposed project would also generate revenue that NYCHA would dedicate to improvements to the adjacent Holmes Towers development and to ensuring NYCHA's financial sustainability.

FRESH PROGRAM

The proposed project would not include any retail space and therefore the FRESH program does not apply.

WATERFRONT REVITALIZATION PROGRAM

As described above, the project site is located within the Coastal Zone as shown in **Figure B-3**. Therefore, the proposed project is subject to a consistency review under the City's WRP. The WRP

includes policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. The WRP Consistency Assessment Form (CAF) (see **Appendix B**) lists the WRP policies and asks whether the proposed project would promote or hinder each policy, or if each policy would not be applicable. **Appendix B** also provides additional information for the policies that have been checked “promote” or “hinder” in the WRP Consistency Assessment Form. Overall, the proposed project would be consistent with the City’s WRP. In a letter dated August 8, 2018, DCP concurred that the proposed project would not hinder the achievement of any WRP policy. (See **Appendix A**) *

A. INTRODUCTION

This attachment describes the socioeconomic changes that could result from the proposed project and assesses whether such changes could result in significant adverse impacts. As described in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, the socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a proposed project directly or indirectly changes any of these elements. The objective of the CEQR analysis is to disclose whether any of these changes would result in significant adverse impacts when compared with what could happen in the future without the proposed project (the “No Action” condition).

In accordance with *CEQR Technical Manual* guidelines, this socioeconomic assessment considers five ways that a proposed project could alter socioeconomic conditions: (1) direct residential displacement; (2) direct business displacement; (3) indirect residential displacement; (4) indirect business displacement; and (5) adverse effects on specific industries.

As described below, this analysis finds that the proposed project would not result in significant adverse socioeconomic impacts for any of the CEQR areas of socioeconomic concern.

B. METHODOLOGY**BACKGROUND**

Although socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. In some cases, these changes may be substantial but not adverse. In other cases, these changes may be good for some groups, but bad for others. The objective of the CEQR analysis is to disclose whether any changes created by the proposed project would have a significant impact compared with what would happen in the No Action condition.

An assessment of socioeconomic impacts distinguishes between impacts on the residents and businesses in an area, and separates these impacts into direct and indirect displacement for both segments. Direct displacement occurs when residents or businesses are involuntarily displaced from the actual project site or sites directly affected by it. Indirect or secondary displacement occurs when residents, business, or employees are involuntarily displaced due to a change in socioeconomic conditions in the area caused by a proposed project. Examples of indirect residential displacement include the displacement of low-income residents who are forced to move due to rising rents caused by higher-income housing introduced by a proposed project. Examples of indirect business displacement include higher-paying commercial tenants replacing industrial uses when new uses introduced by a project causes commercial rents to increase. Unlike direct displacement, the exact occupants to be indirectly displaced are not known. Therefore, an

assessment of indirect displacement usually identifies the size and type of groups of residents, businesses, or employees potentially affected.

Some projects may affect the operation and viability of a specific industry not necessarily tied to a specific location e.g., new regulations that prohibit or restrict the use of certain processes that are critical to certain industries. In these cases, the CEQR review process may involve an assessment of the economic impacts of the project on that specific industry.

DETERMINING WHETHER A SOCIOECONOMIC ASSESSMENT IS APPROPRIATE

According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may be reasonably expected to create socioeconomic changes in the area affected by the project that would not be expected to occur in the absence of the project. The following screening assessment considers threshold circumstances identified in the *CEQR Technical Manual* (enumerated below) that can lead to socioeconomic changes warranting further assessment, and compares those thresholds to the proposed project's Reasonable Worst Case Development Scenario (RWCDs).

1. Direct Residential Displacement: Would the project directly displace population to the extent that the socioeconomic character of the neighborhood would be substantially altered? Displacement of less than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood.

There are no residential dwelling units (DUs) located on the project site. Therefore, the proposed project would not result in any direct residential displacement, and no further assessment of this concern is warranted.

2. Direct Business Displacement: Would the project directly displace more than 100 employees, or would it displace any business that is unusually important because its products or services are uniquely dependent on its location, are subject of policies or plans aimed at its preservation, or that serves a population uniquely dependent on its services in its present location?

There are no commercial buildings on the project site. Therefore, the proposed project would not result in any direct business displacement, and no further assessment of this concern is warranted.

3. Indirect Displacement due to increased rents: Would the project result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood? Residential development of 200 units or less or commercial development of 200,000 square feet or less would typically not result in significant socioeconomic impacts. For projects exceeding these thresholds, assessments of indirect residential displacement and indirect business displacement are appropriate.

The proposed project would result in 339 incremental DUs, exceeding the 200-DU threshold warranting assessment of potential indirect residential displacement. Therefore, further assessment of potential indirect residential displacement due to increased rents is warranted (see Section C, "Preliminary Assessment").

The proposed project does not include any commercial development. The proposed project would not introduce any land use trends that do not already exist within the study area. Therefore, further assessment of potential indirect business displacement due to increased rents is not warranted.

4. Indirect Business Displacement due to retail market saturation: Would the project add to, or create, a retail concentration that may draw a substantial amount of sales from existing businesses within the study area to the extent that certain categories of business close and

vacancies in the area increase, thus resulting in a potential for disinvestment on local retail streets? Projects resulting in less than 200,000 square feet of retail on a single development site would not typically result in socioeconomic impacts.

The proposed project would not introduce any commercial development. Therefore, the proposed project would not have the potential to result in disinvestment on local retail streets due to retail market saturation and associated competitive effects.

5. Adverse Impacts on Specific Industries: Is the project expected to affect conditions within a specific industry? An analysis is warranted if a substantial number of residents or workers depend on the goods or services provided by the affected businesses or if it would result in the loss or substantial diminishment of a particularly important product or service within the industry.

As the proposed project would not result in direct or indirect business displacement, an assessment of adverse effects on specific industries is not warranted.

Based on the above screening assessment, the proposed project warrants further assessment of indirect residential displacement.

ANALYSIS FORMAT

Based on *CEQR Technical Manual* guidelines, the analysis of indirect residential displacement begins with a preliminary assessment. The objective of the preliminary assessment is to respond to specific questions identified in the *CEQR Technical Manual* as a means of learning enough about the potential effects of a project to either rule out the possibility of significant adverse impacts, or determine that a more detailed analysis is required to fully determine the extent of the impacts. In this case, a preliminary assessment was sufficient to conclude that the proposed project would not result in any significant adverse socioeconomic impacts resulting from indirect residential displacement.

STUDY AREA DEFINITION

A socioeconomic study area is the area within which a proposed project could directly or indirectly affect population, housing, and economic activities. A study area typically encompasses a project site and adjacent areas within approximately 400 feet, ¼-mile, or ½-mile, depending upon the project size and study area characteristics. According to the *CEQR Technical Manual*, the larger ½-mile study area is appropriate for projects that would potentially increase the ¼-mile area population by more than 5 percent. Under the future with the proposed project (the “With Action” condition), the proposed project would increase the ¼-mile area population by approximately 607 residents¹; this would represent an approximately 2.1 percent increase in the population anticipated to reside in the ¼-mile study area by the proposed project’s 2021 build year (29,551 residents).² Therefore, a ¼-mile study area is warranted.

Because socioeconomic analyses depend on demographic data, it is appropriate to adjust the study area boundary to conform to the census tract delineation that most closely approximates the

¹ Residential population estimates resulting from the proposed project are based on the proposed project’s incremental DUs (339) and the average household size for Manhattan Community District 8 (1.79 persons per household) from the 2010 Census.

² See Attachment B, “Land Use, Zoning, and Public Policy,” for a description of planned development projects in the study area by the 2021 analysis year.

desired radius (i.e., a ¼-mile radius surrounding the project site). The census tracts that constitute the “socioeconomic study area,” or “study area,” are shown in **Figure C-1**. The adjusted study area captures an approximately ¼-mile area surrounding the project site and includes Census Tracts 152, 154, and 156.01. The study area is mostly within Manhattan Community District 8, with a small portion within Manhattan Community District 11.

DATA SOURCES

Information used in the analysis of indirect residential displacement—including population, housing, rents, and incomes—were gathered from the U.S. Census Bureau’s 2000 Census and 2012–2016 American Community Survey (ACS) 5-year estimates. The average household size information for Manhattan Community District 8 was obtained through the New York City Department of City Planning (DCP) Community Portal and is based on the 2010 Census. The ¼-mile study area minimally encroaches into Community District 11. Due to the location of the project site, and the minimal area of the study area that is within Community District 11, Community District 8 was chosen for purposes of data analysis. Study area and comparative geographies’ market-rate asking rents were researched using online real estate listing sites, including StreetEasy. StreetEasy is a searchable online database that uses web data extraction to compile an aggregated list of residential property listings from most of New York City’s largest brokerage firm and hundreds of small-scale brokers. Data on the study area were compared to Manhattan (New York County) and New York City.

C. PRELIMINARY ASSESSMENT

As described in the *CEQR Technical Manual*, indirect residential displacement usually results from substantial new development that is markedly different from existing uses and activity in an area, which can lead to increased property values in the area. Increased property values can lead to increased rents, which can make it difficult for some existing residents to remain in their homes.

Generally, an indirect residential displacement analysis is conducted only in cases in which the potential impact may be experienced by renters living in privately held DUs unprotected by rent control, rent stabilization, or other government regulations restricting rents, and whose incomes or poverty status indicates that they may not support substantial rent increases. Residents who are homeowners, or who are renters living in rent-restricted DUs, would not be vulnerable to rent pressures. The *CEQR Technical Manual*’s step-by-step guide for a preliminary assessment of indirect residential displacement is presented in bold italics below.

1. Determine if the proposed project would add new population with higher average incomes compared with the average incomes of the existing populations and any new population expected to reside in the study area without the project.

EXISTING CONDITIONS AND TRENDS

Household income characteristics for the study area population are described using the average household income. Social Explorer calculates the average household income by dividing the aggregate income by the total number of households in the study area.

The average household income in the study area is slightly lower in Manhattan but higher than in New York City (see **Table C-1**). Since 2000, the average household income decreased in the study area, while incomes increased in Manhattan and New York City. In 2000, the average household income of the study area (\$125,854) was lower than that of Manhattan (\$133,396) and higher than

12/19/2017



- Project Site
- Study Area (Quarter-mile boundary)
- Socioeconomic Study Area Boundary
- Census Tract

0 500 FEET

BELLWETHER AT YORKVILLE

Socioeconomic Study Area
Figure C-1

that of New York City (\$88,526). According to the 2012–2016 ACS, the average household income in the study area (\$121,075, or a 3.8 percent decrease since 2000) was lower than that of Manhattan (\$141,098), and higher than New York City (\$89,935). During the same time frame, the average household income increased by 5.8 percent in Manhattan and 1.6 percent in New York City.

Table C-1
Average Household Income

	2000	2012–2016	Percent Change
Socioeconomic Study Area	\$125,854	\$121,075	-3.8
Manhattan	\$133,396	\$141,098	5.8
New York City	\$88,526	\$89,935	1.6
Note: All dollar figures have been adjusted to 2017 dollars based on the U.S. Department of Labor, Consumer Price Index, 2017 Half.			
Sources: U.S. Census Bureau, Census 2000 and 2012–2016 ACS. Accessed through Social Explorer in December 2017.			

Residential rents have been increasing in the study area since 2000 (see **Table C-2**). Between the 2000 Census and the 2012–2016 ACS, the average gross rent³ increased by 4.0 percent. By comparison, the average gross rent grew at much higher rates in Manhattan (16.6 percent) and New York City (20.2 percent). The median gross rent also grew in the study area, from \$1,878 in 2000 to \$1,900 according to the 2012–2016 ACS. Similar to average gross rent trends, the median gross rent for the comparison geographies grew faster than that of the study area. According to the data, however, both the average and median gross rents in the study area were higher than that of Manhattan and New York City.

Table C-2
Average and Median Gross Rent

Area	Average Gross Rent			Median Gross Rent		
	2000	2012–2016	Percent Change	2000	2012–2016	Percent Change
Socioeconomic Study Area	\$1,805	\$1,628	4.0	\$1,878	\$1,900	16.7
Manhattan	\$1,492	\$1,204	16.6	\$1,740	\$1,602	33.0
New York City	\$1,159	\$1,067	20.2	\$1,393	\$1,316	23.4
Note: All dollar figures have been adjusted to 2017 dollars based on the U.S. Department of Labor, Consumer Price Index, 2017 Half.						
Sources: U.S. Census Bureau, Census 2000 and 2012–2016 ACS. Accessed through Social Explorer in December 2017.						

The U.S. Census and ACS data provide general information about the rate at which housing costs are changing in a neighborhood but do not provide specific rent information according to regulation status or DU size. Average asking rents for comparable rentals on the market in the socioeconomic study area are therefore used to provide a fuller understanding of current market conditions. **Table C-3** summarizes online listing data for apartments in the study area. The average rents presented in the table were calculated based on market-rate rental DUs; average asking rents for market-rate DUs are notably higher than the average and median gross rent estimates from the 2012–2016 ACS.

³ Gross rent is the contract rent inclusive of the average monthly cost of utilities and building fuels.

Table C-3
Average Asking Rents in the Study Area

	Studio	One Bedroom	Two Bedroom	Three Bedroom or larger
Socioeconomic Study Area	\$2,381	\$2,974	\$3,956	\$6,462
Source: Streeteasy.com (http://streeteasy.com), accessed in December 2017.				

FUTURE WITHOUT THE PROPOSED PROJECT

In the No Action condition, the project site would remain as is under the existing conditions. Under both the existing conditions and No Action condition, the project site would contain two play areas, landscaping and walkways serving the New York City House Authority (NYCHA) John Haynes Holmes Towers development. Therefore, no socioeconomic changes are anticipated on the project site in the No Action condition.

PROBABLE IMPACTS OF THE PROPOSED PROJECT

In the With Action condition, the proposed project would provide approximately 169 DUs of affordable housing. Ten percent of the affordable units (or 17 DUs) would be at 30 percent of the area median income (AMI); 15 percent of affordable units at 40 percent AMI (or 25 DUs); 15 percent of affordable units at 50 percent AMI (or 25 DUs), and 60 percent of affordable units at 60 percent AMI (or 102 DUs).

In order to estimate the average household income of residents introduced by the proposed project, it is necessary to estimate the incomes of future residents in both market-rate and affordable DUs. For market-rate DUs, an estimate was made based on research into current market-rate rents in the study area (see **Table C-3**), and the assumption that incoming market-rate renters would be spending approximately 30 percent of their household income on rent, since the United States Department of Housing and Urban Development (HUD) defines families who pay more than 30 percent of their income for housing as cost burdened.

Current market rents were estimated through an online search of rental property listings within the study area. Studio DUs were advertised at an average of \$2,381 per month; one-bedroom DUs were advertised at \$2,974 per month; two-bedroom DUs were advertised at \$3,956 per month; and three-bedroom or larger DUs were advertised at \$6,462 per month.

Assuming that the market-rate renters would be spending 30 percent of their income on rent, a person renting a market-rate DU in the proposed project would have an estimated income between approximately \$95,000 and \$258,000, depending on the DU type (see **Table C-4**). A preliminary unit mix provided by the project sponsor indicates that approximately 12 percent of units would be studios, 41 percent one-bedrooms, 24 percent two-bedrooms, and 22 percent three-bedrooms. Based on this breakdown, the proposed project's market-rate residents would have an estimated average household income of approximately \$157,000.

Table C-4

**Imputed Household Income of Market-Rate Renters
by DU Type/Average Rental Rates**

Unit Size	Monthly Rent ¹	Estimated Monthly Income (Market-Rate Renters)	Estimated Yearly Income ² (Market-Rate Renters)
Studio	\$2,381	\$7,937	\$95,000
1-bedroom	\$2,974	\$9,913	\$119,000
2-bedroom	\$3,956	\$13,187	\$158,000
3-bedrooms or larger	\$6,462	\$21,540	\$258,000

Notes:
¹ Represents the average monthly rent based on December 2017 market listings.
² Household incomes were imputed using the HUD 30 percent guidelines described above; yearly income was rounded to the nearest thousand dollars.

Source:
streteasy.com (<http://streteasy.com>) accessed in December 2017.

As noted above, the proposed project would result in an increase of 339 DUs, including 169 affordable DUs, and 170 market-rate DUs, at different levels of affordability. The levels of affordability are based on percentages of the AMI for the region. The 2018 AMI levels for the New York City region by family size are presented in **Table C-5** below. The AMI for a two-person family was utilized in this analysis based on the average household size for the community district in which the proposed project is located.⁴

Table C-5

2018 New York City AMI

Family Size	30% of AMI	40% of AMI	50% of AMI	60% of AMI	80% of AMI	100% of AMI	120% of AMI	130% of AMI	165% of AMI
1	\$21,930	\$29,240	\$36,550	\$43,860	\$58,480	\$73,100	\$87,720	\$95,030	\$120,615
2	\$25,050	\$33,400	\$41,750	\$50,100	\$66,800	\$83,500	\$100,200	\$108,550	\$137,775
3	\$28,170	\$37,560	\$46,950	\$56,340	\$75,120	\$93,900	\$112,680	\$122,070	\$154,935
4	\$31,290	\$41,720	\$52,150	\$62,580	\$83,440	\$104,300	\$125,160	\$135,590	\$172,095
5	\$33,810	\$45,080	\$56,350	\$67,620	\$90,160	\$112,700	\$135,240	\$146,510	\$185,955

Notes:
The average household size for Manhattan Community District 8 is 1.79 persons per household; therefore, the two-family data on AMI was used to calculate the average household income for the proposed project's affordable households.

Source:
HUD <http://www1.nyc.gov/site/hpd/about/what-is-affordable-housing.page>, last accessed 8/1/17

The average income of a household with rental assistance would be approximately \$25,050 for 30 percent AMI, \$33,400 for 40 percent AMI, \$41,750 for 50 percent AMI, and \$50,100 for 60 percent AMI (see **Table C-5**). With the breakdown in affordability discussed above, the average household income for people living in the affordable DUs would be \$43,800.

Based on the expected allocation of market-rate and affordable DUs, the proposed project's population would have an average household income of approximately \$100,000, which is approximately \$21,000 less than the study area's current average household income (see "Existing Conditions and Trends").

⁴ Average household size for Manhattan Community District 8 (1.79 persons per household), 2010 Census.

Bellwether at Yorkville

Based on the Step 1 analysis, the proposed project's populations would have average household incomes that are similar or lower than the existing and future study area populations. Therefore, the proposed project would not introduce a new concentration of higher-income housing that could substantially alter rental market conditions in the study area. Based on *CEQR Technical Manual* guidelines, the proposed project would not result in significant adverse impacts due to indirect residential displacement. *

A. INTRODUCTION

This attachment assesses the potential impacts of the proposed project on community facilities and services. The 2014 *City Environmental Quality Review (CEQR) Technical Manual* defines community facilities as public or publicly funded schools, child care centers, libraries, health care facilities, and fire and protection services. CEQR methodology assesses direct effects on community facilities, such as when a facility is physically displaced or altered, and indirect effects, which could result from increased demand for community facilities and services generated by new users such as the new population that would result from the proposed project.

The proposed actions would result in the development of the project site with a new, mixed-use residential and community facility building (the “proposed project”) containing 339 dwelling units (DUs), including approximately 169 affordable DUs. Therefore, an assessment was conducted to determine whether the proposed project would result in any significant adverse impacts to community facilities. As described in this attachment, the proposed project would not result in any significant adverse impacts on community facilities.

B. PRELIMINARY SCREENING

This analysis of community facilities has been conducted in accordance with *CEQR Technical Manual* methodologies and the latest data and guidance from agencies such as the New York City Department of Education (DOE) and the New York City Department of City Planning (DCP).

The purpose of the preliminary screening is to determine whether a community facilities assessment is warranted. As recommended by the *CEQR Technical Manual*, a community facilities assessment is warranted if a proposed project has the potential to result in either direct or indirect effects on community facilities. If a proposed project would physically alter a community facility, whether by displacement of the facility or other physical change, this “direct” effect triggers the need to assess the service delivery of the facility and the potential effect that the physical change may have on that service delivery. New population added to an area as a result of a proposed project would use existing services, which may result in potential “indirect” effects on service delivery. Depending on the size, income characteristics, and age distribution of the new population, there may be effects on public school, libraries, or child care centers.

DIRECT EFFECTS

The proposed project would not displace or otherwise directly affect any public schools, child care centers, libraries, health care facilities, or police and fire protection service facilities. The existing NYCHA residential building adjacent to the project site within the Holmes Towers development contains ground floor community facility space. It is anticipated that access to and operation of this space would be maintained during construction of the proposed project and closures of this existing community facility use would not be required. Therefore, an analysis of direct effects is not warranted.

INDIRECT EFFECTS

The *CEQR Technical Manual* provides thresholds for guidance in making an initial determination of whether a detailed analysis is necessary to determine potential impacts due to indirect effects on community facilities. **Table D-1** lists those *CEQR Technical Manual* analysis thresholds for each community facility type. If a proposed project exceeds the threshold for a specific facility type, a more detailed analysis is warranted. A preliminary screening analysis was conducted to determine if the proposed project would exceed any of the *CEQR Technical Manual* thresholds.

Table D-1
Preliminary Screening Analysis Criteria

Community Facility	Threshold For Detailed Analysis
Public schools	More than 50 elementary/intermediate school or 150 high school students
Libraries	Greater than 5 percent increase in ratio of DUs to libraries in borough
Health care facilities (outpatient)	Introduction of sizeable new neighborhood where none existed before ¹
Child care centers (publicly funded)	More than 20 eligible children based on number of low- and low/moderate-income DUs by borough
Fire protection	Introduction of sizeable new neighborhood where none existed before ¹
Police protection	Introduction of sizeable new neighborhood where none existed before ¹
Note: ¹ The <i>CEQR Technical Manual</i> cites the Hunter's Point South project as an example of a project that would introduce a sizeable new neighborhood where none existed before. The Hunter's Point South project would introduce approximately 6,650 new DUs to the Hunter's Point South waterfront in Long Island City, Queens. Source: <i>CEQR Technical Manual.</i>	

The proposed project would result in the development of 339 DUs on the project site, an increment of 339 DUs above the future without the proposed project (the "No Action" condition). Approximately 169 of these DUs would be affordable.

As described below, based on the screening criteria in **Table D-1**, a detailed assessment of public schools (elementary and intermediate) is warranted. The proposed project would not have the potential to have a significant adverse impact on high schools, child care facilities, libraries, health care facilities, or police and fire services; therefore, detailed analyses of indirect effects on these community facility uses are not warranted.

PUBLIC SCHOOLS

The *CEQR Technical Manual* recommends conducting a detailed analysis of public schools if a proposed action would generate more than 50 elementary/intermediate school students and/or more than 150 high school students. Based on student generation rates provided in the *CEQR Technical Manual* (0.12 elementary, 0.04 intermediate, and 0.06 high school students per DU in Manhattan), the proposed project would generate approximately 41 elementary school students, 14 intermediate school students, and 20 high school students. The 55 elementary/intermediate school students projected to be introduced by the proposed project warrants a detailed analysis of the proposed project's potential effects on elementary and intermediate schools. The number of high school students introduced by the proposed project does not exceed the *CEQR Technical Manual* threshold warranting a detailed analysis of potential effects on high schools.

LIBRARIES

Potential impacts on libraries can result from an increased user population. According to the *CEQR Technical Manual*, a proposed action that results in a 5 percent increase in the average number of DUs served per branch—which is 901 DUs in Manhattan—may cause a significant impact on library services and require further analysis. The proposed project would introduce an increment of 339 DUs. Therefore, the proposed project does not exceed this threshold, and a detailed analysis of libraries is not warranted.

CHILD CARE CENTERS

According to the *CEQR Technical Manual*, if a proposed action would introduce more than 20 children eligible for child care to the study area's child care facilities, a detailed analysis of its impact on publicly funded child care facilities is warranted. This threshold is based on the number of low-income and low/moderate-income DUs introduced by a proposed action. Low-income and low/moderate-income are intended to approximate the financial eligibility criteria for publicly funded child care facilities established by the Administration for Children's Services, which generally corresponds to 200 percent of the Federal Poverty Level or 80 percent of the area median income (AMI). In Manhattan, projects introducing 170 or more low- to moderate-income DUs would meet the threshold for analysis of introducing 20 or more children eligible for child care services. The proposed project would introduce an increment of approximately 169 affordable DUs (all of which would be targeted to households making less than 80 percent of AMI); therefore, a detailed assessment of child care centers is not warranted.

HEALTH CARE FACILITIES

Health care facilities include public, proprietary, and nonprofit facilities that accept government funds (usually in the form of Medicare and Medicaid reimbursements) and that are available to any member of the community. Examples of these types of facilities include hospitals, nursing homes, clinics, and other facilities providing outpatient health services.

According to the *CEQR Technical Manual*, if a proposed action would create a sizeable new neighborhood where none existed before, there may be increased demand on local public health care facilities, which may warrant further analysis of the potential for indirect impacts on outpatient health care facilities. The proposed project is located within the Yorkville neighborhood of Manhattan, which is an established neighborhood with an extensive history of dense residential development. The proposed project would not result in the creation of a sizeable new neighborhood where none existed before. Therefore, a detailed analysis of indirect effects on health care facilities is not warranted.

POLICE AND FIRE SERVICES

The *CEQR Technical Manual* recommends detailed analyses of impacts on police and fire services in cases where a proposed action would affect the physical operations of, or direct access to and from, a precinct house or fire station, or where a proposed action would create a sizeable new neighborhood where none existed before. The proposed project would not result in these direct effects on either police or fire services, nor would it create a sizable new neighborhood where none existed before; therefore, no further analysis is warranted.

C. POTENTIAL INDIRECT EFFECTS ON PUBLIC ELEMENTARY AND INTERMEDIATE SCHOOLS

METHODOLOGY

This section presents an assessment of the potential effect of the proposed project on public elementary and intermediate schools serving the project site. Following the methodologies in the *CEQR Technical Manual*, the study area for the analysis of elementary and intermediate schools is the school district's "subdistrict" (also known as the "region" or "school planning zone") in which the proposed project is located. As mentioned above, the proposed project would result in the development of a mixed-use residential and community facility building, located in subdistrict 5 of Community School District (CSD) 2 (see **Figure D-1**).

In accordance with the *CEQR Technical Manual*, this schools analysis uses the most recent DOE data on school capacity, enrollment, and utilization rates for elementary and intermediate schools in the subdistrict study area and New York City School Construction Authority (SCA) projections of future enrollment. Specifically, the existing conditions analysis uses data provided in the DOE's *Utilization Profiles: Enrollment/Capacity/Utilization, 2016–2017* edition. Future conditions are then predicted based on SCA enrollment projections and data obtained from SCA's Capital Planning Division on the number of new DUs and students expected at the subdistrict level.

The future utilization rate for school facilities is calculated by adding the estimated enrollment from the proposed residential projects in the schools' study area to DOE's projected enrollment, and then comparing that number with projected capacity. DOE does not include charter enrollment in its enrollment projections. DOE's enrollment projections for years 2016 through 2025, the most recent data currently available, were obtained from DCP. These enrollment projections are based on broad demographic trends and do not explicitly account for discrete new residential projects planned for the study area. Therefore, estimates for the student population that would be introduced by other new projects expected to be completed within the study area have been obtained from SCA's Capital Planning Division and are added to the projected enrollment to ensure a more conservative prediction of future enrollment and utilization. In addition, new capacity from any new school project identified in the DOE Five-Year Capital Plan are included if construction has begun or if deemed appropriate to include in an analysis by the lead agency and SCA.

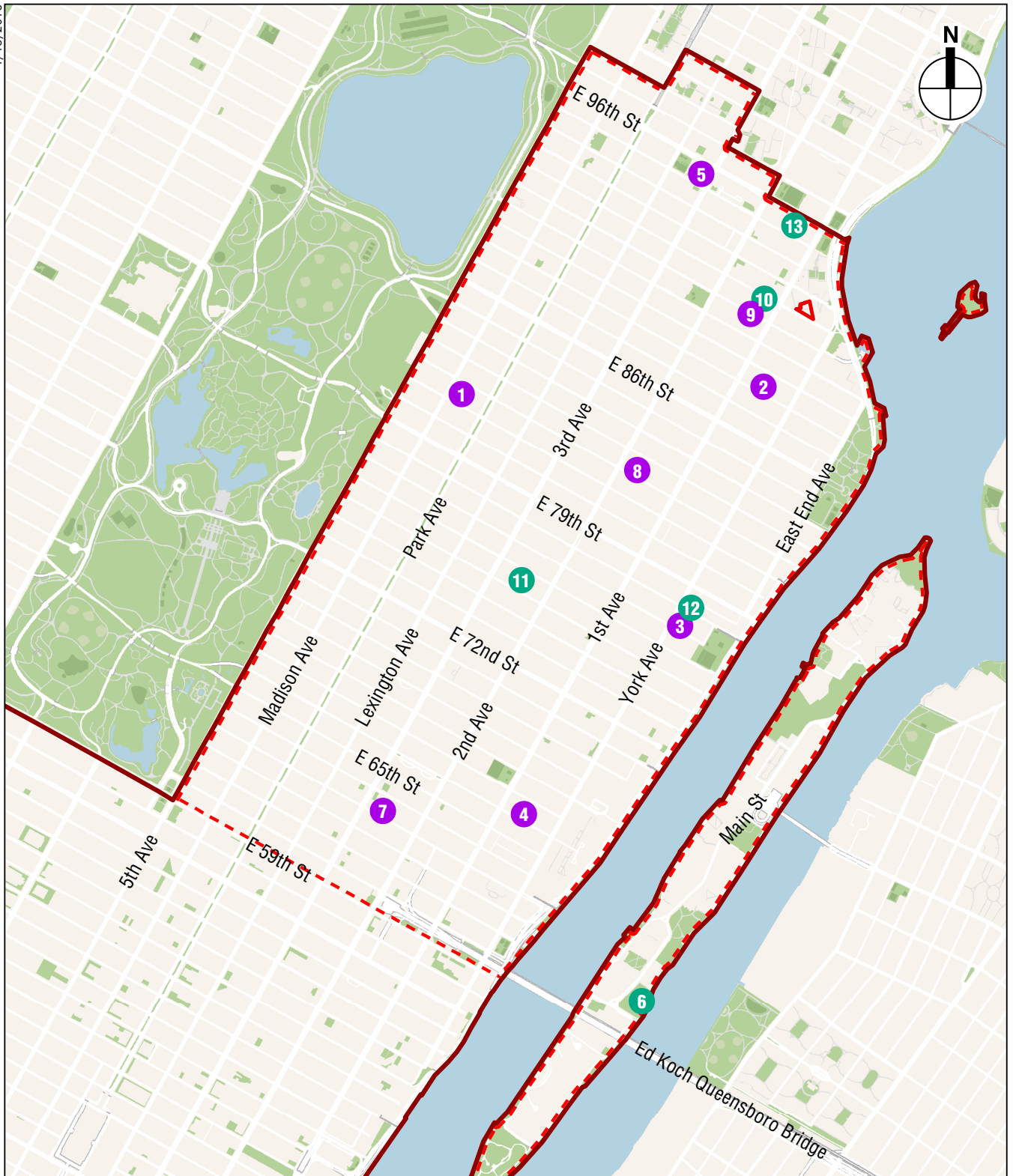
The effect of the new students introduced by the proposed project on the capacity of schools within the study areas is then evaluated. According to the *CEQR Technical Manual*, a significant adverse impact may occur if a proposed project would result in both of the following conditions:

1. A utilization rate of the elementary and/or intermediate schools in the subdistrict study area that is equal to or greater than 100 percent in the future with the proposed project (the "With Action" condition); and
2. An increase of 5 percentage points or more in the collective utilization rate between the No Action and With Action conditions.

EXISTING CONDITIONS

ELEMENTARY SCHOOLS—SUBDISTRICT 5 OF CSD 2

According to DOE's 2016–2017 school year enrollment figures, nine elementary school organizations serve subdistrict 5/CSD 2 (see **Figure D-1**). As shown in **Table D-2**, elementary



- Project Site
- Community School District (CSD 2) Boundary
- CSD Sub-District (5) Boundary

- Elementary School
- Intermediate School

0 2,000 FEET

Public Elementary and Intermediate Schools
Serving the Study Area
Figure D-1

schools in the subdistrict have a total enrollment of 4,873 and are currently operating at 102.9 percent utilization, with a deficit of 136 seats. The zoned elementary school for the project site is Yorkville Community School.

INTERMEDIATE SCHOOLS—SUBDISTRICT 5 OF CSD 2

Five intermediate school organizations serve subdistrict 2/CSD 5 (see **Figure D-1** and **Table D-2**). Intermediate schools in the subdistrict have a total enrollment of 2,142 students and are currently operating at 90.5 percent utilization, with a surplus of 225 seats. The zoned intermediate school for the project site is J.H.S. 167 Robert F. Wagner.

Table D-2

**Public Elementary and Intermediate Schools Serving the Study Area:
Enrollment and Capacity Data, 2015–2016 School Year**

Map No.	Name	Address	Enrollment	Capacity	Available Seats	Utilization
Elementary Schools						
Subdistrict 2 of CSD 30						
1	P.S. 6 (Lillie D. Blake)	45 East 81st Street	683	577	-106	118.4
2	P.S. 151 (Yorkville Community School)	421 East 88th Street	537	716	179	75.0%
3	P.S. 158 (Bayard Taylor)	1458 York Avenue	781	849	68	92.0%
4	P.S. 183 (Robert L. Stevenson)	419 East 66th Street	567	443	-124	128.0%
5	P.S. 198 (Isador E. Ida Straus)	1700 3rd Avenue	468	464	-4	100.9
6	P.S./I.S. 217 (Roosevelt Island)	645 Main Street	550	534	-16	103.0%
7	P.S. 267 (East Side Elementary School)	213 East 63rd Street	401	318	-83	126.1%
8	P.S. 290 (Manhattan New School)	311 East 82nd Street	592	461	-131	128.4%
9	P.S. 527 (East Side School for Social Action)	323 East 91st Street	294	375	81	78.4%
CSD 2, Subdistrict 5 Total²			4,873	4,737	-136	102.9%
Intermediate/Middle Schools						
Subdistrict 2 of CSD 30						
6	P.S./I.S. 217 (Roosevelt Island)	645 Main Street	63	61	-2	103.3%
11	I.S. 114 (East Side Middle School)	331 East 91st Street	443	491	48	90.2%
12	J.H.S. 167 (Robert F. Wagner)	220 East 76th Street	1,357	1,534	177	88.5%
13	Yorkville East Middle School	1458 York Avenue	213	206	-7	103.4%
14	Life Science Secondary School	320 East 96th Street	66	75	9	88.0%
CSD 30, Subdistrict 3 Total²			2,142	2,367	225	90.5%
Notes: ¹ See Figure D-1 . ² The P.S. 77 Lower Lab School and P.S. 225 Ella Baker School have been excluded from the analysis because they draw from a large area (i.e., borough or citywide), in accordance with <i>CEQR Technical Manual</i> guidance. Source: DOE <i>Utilization Profiles: Enrollment/Capacity/Utilization, 2016–2017</i> .						

FUTURE WITHOUT THE PROPOSED PROJECT

The latest SCA enrollment projections for Subdistrict 5/CSD 2 project elementary and intermediate school enrollment through 2021. These enrollment projections form the baseline projected enrollment in the No Action condition (see **Table D-3**). The students introduced by other background residential projects are added to this baseline projected enrollment using SCA's *Projected New Housing Starts* data and shown in **Table D-3**.

Future conditions for 2021 are forecast based on SCA enrollment projections and data obtained from SCA's Capital Planning Division regarding the number of new DUs and students expected at the subdistrict level. The future utilization rate for school facilities is calculated by adding the

estimated enrollment from the proposed residential projects in the schools' study area to DOE's projected enrollment, and then comparing that number with projected school capacity.

Analysis of the No Action condition also takes into account a series of proposals recently approved by the DOE's Panel of Educational Policy. An Educational Impact Statement tabled and approved by the Panel for Educational Policy during its November 28, 2017 meeting aims to truncate the Life Sciences Secondary School from a 6–12 school to a 9–12 school in the 2018–2019 school year.¹ As a result, the Life Sciences Secondary School's intermediate school capacity has been removed from intermediate school capacity in the subdistrict in the future.

Table D-3
Estimated Public Elementary and Intermediate School
Enrollment, Capacity, and Utilization:
No Action Condition

Study Area	Projected Enrollment in 2021 ¹	Students Introduced by Residential Development in the No Action Condition ²	Total No Action Condition Enrollment	Capacity	Available Seats	Utilization
Elementary Schools						
Subdistrict 5 of CSD 2	4,900	173	5,073	4,737	-336	107.1%
Intermediate Schools						
Subdistrict 5 of CSD 2	2,165	584	2,749	2,292 ³	-457	119.9%
Notes: ¹ Elementary and intermediate school enrollment in the subdistrict study area in 2021 was calculated by applying SCA supplied percentages for the subdistrict to the relevant district enrollment projections. For subdistrict 5/CSD 2, the district's 2021-2022 elementary enrollment projection of 16,514 was multiplied by 29.67 percent. The district's intermediate enrollment projection of 7,554 was multiplied by 28.66 percent. ² SCA <i>Projected New Housing Starts</i> student numbers for subdistrict 5/CSD 2. ³ In the future with the grade truncation of Life Sciences Secondary School from grades 6–12 to grades 9–12 beginning in the 2018–2019 school, it is assumed this school's intermediate school capacity would be removed from the district's capacity. Sources: DOE Enrollment Projections (Projected 2016–2025); DOE, <i>Utilization Profiles: Enrollment/Capacity/Utilization, 2016–2017</i> ; DOE <i>2015–2019 Proposed Five-Year Capital Plan, Amendment February 2017</i> ; SCA.						

ELEMENTARY SCHOOLS—SUBDISTRICT 5 OF CSD 2

As shown in **Table D-3**, the total No Action condition enrollment in the subdistrict is projected to be 5,073 elementary students. Elementary schools in the subdistrict would operate over capacity (107.1 percent utilization) with a deficit of 336 seats in the No Action condition.

INTERMEDIATE SCHOOLS—SUBDISTRICT 5 OF CSD 2

As shown in **Table D-3**, the total No Action condition enrollment measured at the subdistrict level is projected to be 2,749 intermediate students. Intermediate schools measured at the subdistrict level would operate over capacity with a deficit of 457 seats (119.9 percent utilization).

PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would introduce an increment of 339 DUs to the project site. Based on the public school student generation rates in the *CEQR Technical Manual*, these DUs would introduce

¹http://schools.nyc.gov/NR/rdonlyres/E7002D0C-320B-4E43-82A6-FACB2E85C79B/218228/02M655TruncationEIS_vFinal.pdf

approximately 41 elementary school students and 14 intermediate school students to subdistrict 5/CSD 2 (see **Table D-4**).

ELEMENTARY SCHOOLS—SUBDISTRICT 5 OF CSD 2

In the With Action condition, total elementary school enrollment of subdistrict 5/CSD 2 would increase by 41 students to 5,114 (107.96 percent utilization) with a deficit of 377 seats.

Generally, a significant adverse impact may occur if the proposed project would result in both of the following conditions: (1) a utilization rate in the subdistrict study area that is equal to or greater than 100 percent in the With Action condition; and (2) an increase of 5 percentage points or more in the collective utilization rate between the No Action and With Action conditions.

Table D-4
Estimated Public Elementary and Intermediate School
Enrollment, Capacity, and Utilization:
With Action Condition

Study Area	No Action Enrollment	Students Introduced by the Proposed Project	Total With Action Enrollment	Capacity	Available Seats	Utilization	Change in Utilization Compared with No Action
Elementary Schools							
Subdistrict 5 of CSD 2	5,073	41	5,114	4,737	-377	107.96%	0.87%
Intermediate Schools							
Subdistrict 5 of CSD 2	2,749	14	2,763	2,292	-471	120.55%	0.61%
Sources: DOE Enrollment Projections (Projected 2016–2025); DOE, <i>Utilization Profiles: Enrollment/Capacity/Utilization, 2016–2017</i> , DOE 2015–2019 Proposed Five-Year Capital Plan, Amendment February 2017; SCA.							

In the With Action condition, the utilization rate would continue to be over 100 percent, however, the proposed project would not result in an increase in the utilization rate of more than 5 percentage points over the No Action condition (0.87 percent). Therefore, the proposed project would not result in a significant adverse impact to elementary schools in subdistrict 5/CSD 2.

INTERMEDIATE SCHOOLS—SUBDISTRICT 5 OF CSD 2

In With Action condition, total intermediate school enrollment of subdistrict 5/CSD 2 would increase by 14 students to 2,763 (120.55 percent utilization) with a deficit of 471 seats. The collective utilization rate would continue to be greater than 100 percent; however, as a result of the proposed project the intermediate school utilization rate in subdistrict 5/CSD 2 would increase by only 0.61 percentage points over the No Action condition. As a result the proposed project would not result in a significant adverse impact to intermediate schools in subdistrict 5/CSD 2.

*

A. INTRODUCTION

This attachment assesses the potential impacts of the proposed project on open space resources. Open space is defined in the 2014 *City Environmental Quality Review (CEQR) Technical Manual* as publicly accessible, publicly or privately owned land that is available for leisure, play, or sports or serves to protect or enhance the natural environment. An open space assessment should be conducted if a project would have a direct effect on open space such as eliminating or altering a public open space, or an indirect effect, such as when a substantial new population could place added demand on an area's open spaces.

As described in Attachment A, "Project Description and Screening Analyses," the proposed actions would facilitate the development of a new, mixed-use residential and community facility building (the "proposed project") with 339 dwelling units (DUs) (including 169 affordable DUs), and approximately 12,300 square feet (sf) of community facility space. In accordance with *CEQR Technical Manual* guidelines, an open space assessment was conducted to determine whether the proposed project would result in significant adverse open space impacts.

This assessment finds that the proposed project would not result in significant adverse open space impacts.

B. METHODOLOGY

As defined by the *CEQR Technical Manual*, public open space is accessible to the public on a constant and regular basis, including for designated daily periods. Public open space may be under government or private jurisdiction and typically includes City, state, and federal parkland, esplanades, and plazas designated through regulatory approvals such as zoning. Private open space is not publicly accessible or is available only to limited users. It is not available to the public on a regular or constant basis. Examples of private open space are natural areas with no public access, front and rear yards, rooftop recreational facilities, and stoops or landscaped grounds used by community facilities, such as public and private educational institutions, where the open space is accessible only to the institution-related population.

Open spaces can be characterized as either active or passive depending on the activities the space allows. In many cases open space may be used for both active and passive recreation. Open space that is used for sports, exercise, or active play is classified as "active open space," and consists primarily of recreational facilities. Passive open spaces are used for relaxation, such as sitting or strolling. Active and passive open spaces are further defined in Section C, "Existing Conditions."

DIRECT EFFECTS

According to the *CEQR Technical Manual*, a proposed project would directly affect open space if it causes the loss of public open space, changes the use of an open space so that it no longer serves the same user population, limits public access to an open space, or results in increased noise or air

pollutant emissions, odor, or shadows that would temporarily or permanently affect the usefulness of a public open space. The proposed project would not result in any of these conditions; therefore, an assessment of the proposed project's direct effects on open space is not warranted.

The project site contains two play areas serving the John Haynes Holmes Towers development (the "Holmes Towers development"), which would be removed by construction of the proposed project, but these play areas would be replaced within the Holmes Towers development as part of the proposed project. Specifically, the proposed project includes three new and improved play areas in the Holmes Towers development in the southwest, southeast, and north-central portions of the campus, as shown on Figure A-2. Furthermore, open spaces within New York City Housing Authority (NYCHA) are typically for the use of NYCHA residents, are not open to the general public and are not considered public open space for the purposes of CEQR analysis.

INDIRECT EFFECTS

As described in the *CEQR Technical Manual*, open space can be indirectly affected by a proposed action if the project would add enough population, either residential or non-residential, to noticeably diminish the capacity of open space in the area to serve the future population. Typically, an assessment of indirect effects is conducted when a project would introduce more than 200 residents or 500 workers to an area; however, the thresholds for assessment are slightly different for areas of the City that have been identified as either underserved or well-served by open space. For areas underserved by open space, the threshold for assessment is more than 50 residents or 125 workers, and for areas well-served by open space, the threshold for assessment is more than 350 residents or 750 workers. If a project is not located within an underserved or well-served area, an open space assessment should be conducted if that project would generate more than 200 residents or 500 employees. The project site is not located within an area that has been identified as either underserved or well-served.

The proposed project would result in an incremental increase of 339 DUs compared to the No Action condition, which would introduce an estimated 607 additional residents to the project site.¹ Therefore, an open space assessment for the proposed project's residential population is warranted.

The proposed project would introduce approximately 13 workers compared to the No Action condition. This would not exceed the *CEQR Technical Manual* threshold for analysis of non-residential populations and therefore a non-residential open space assessment is not warranted.

STUDY AREAS

The *CEQR Technical Manual* recommends establishing a study area or areas as the first step in an open space assessment. The study areas are based on the distances that respective users—workers and residents—are likely to walk to an open space. According to the *CEQR Technical Manual*, workers are assumed to walk approximately ¼-mile from their place of work to an open space, while residents are assumed to walk approximately ½-mile to an open space.

Because this analysis is for the proposed project's residential population, the adequacy of open space resources was assessed for the ½-mile (residential) study area. This study area was adjusted to include all census tracts with at least 50 percent of their area within the ½-mile boundary. In this way, the study area allows for analysis of both the open spaces in the area as well as population

¹ Residential population estimates resulting from the proposed project are based on the average household size for Manhattan Community District (CD) 8 (1.79 persons per household).

data. As shown on **Figure E-1**, the ½-mile open space study area is defined as Census Tracts 144.01, 144.02, 146.01, 146.02, 148.02, 152, 154, 156.01, 156.02, 158.01, 158.02, and 164.

As shown on **Figure E-1**, the open space study area is generally bounded by East 96th and 104th Streets to the north, First Avenue and the East River to the east, East 84th and 86th Streets to the south, and Third and Park Avenues to the west.

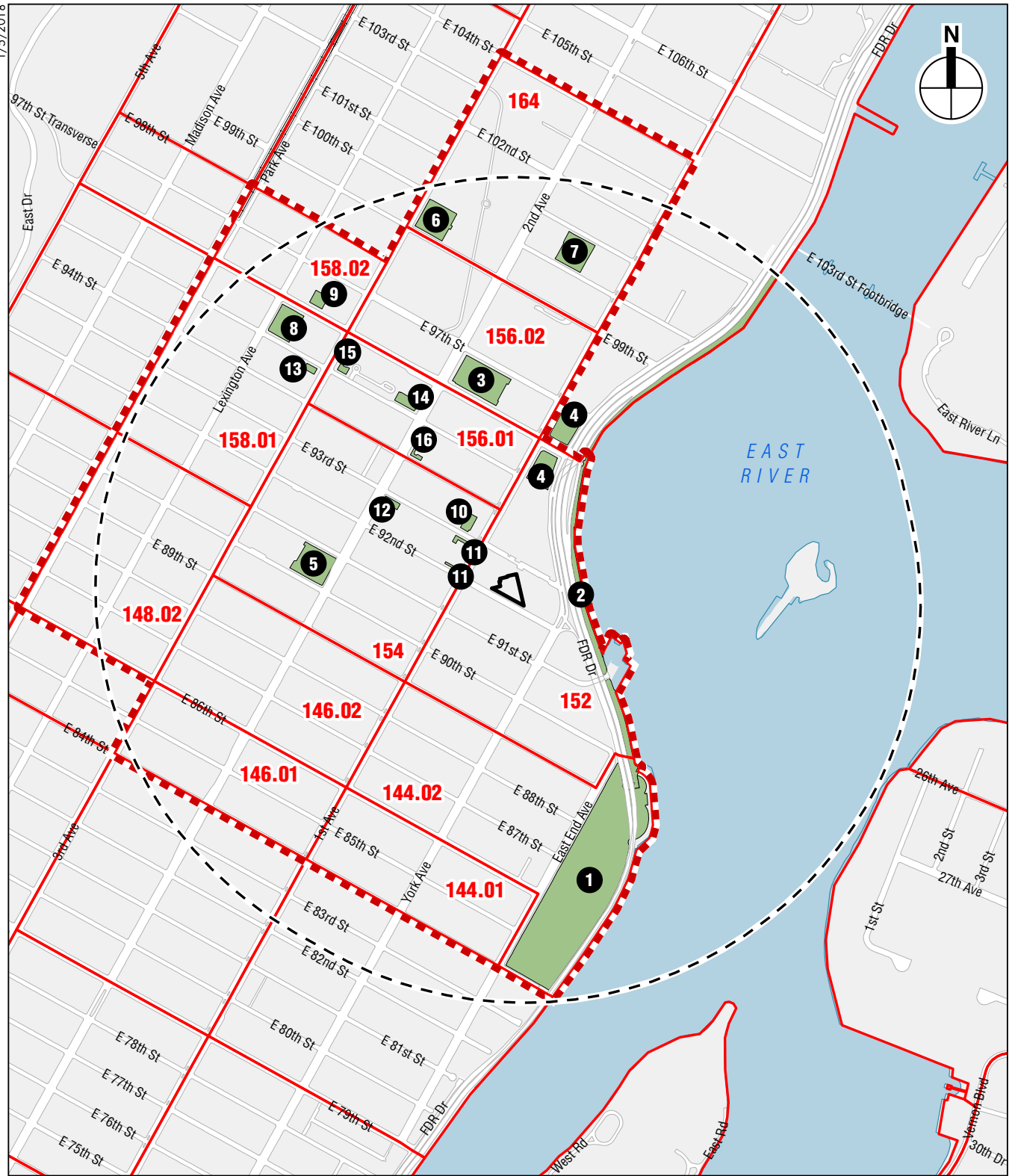
INVENTORY OF OPEN SPACE RESOURCES AND ANALYSIS APPROACH

Publicly accessible open spaces and recreational facilities were inventoried to determine their size, character, utilization, amenities, and condition. Open spaces that are not accessible to the general public or that do not offer usable recreational areas, such as spaces where seating is unavailable, were generally excluded from the survey. In accordance with the *CEQR Technical Manual*, publicly accessible open space is defined as facilities open to the public at designated hours on a regular basis and is assessed for impacts using both a quantitative and qualitative analysis, whereas private open space is not accessible to the general public on a regular basis and is considered qualitatively. Field surveys conducted in December 2017 and secondary sources, such as the New York City Department of Parks and Recreation (NYC Parks) and New York City Department of Informational Technology and Telecommunications (DoITT) Geographic information system (GIS) data, were used to determine the number, availability, and condition of publicly accessible open space resources in the residential study area.

Each open space was determined to be active or passive by the uses that the design of the space allows. Active open space is part of a facility used for active play such as sports or exercise and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses, lawns, and paved areas for active recreation. Passive open space is used for sitting, strolling, and relaxation, and typically contains benches, walkways, and picnicking areas. However, some passive spaces can be used for both passive and active recreation; a green lawn or a riverfront walkway, for example, can also be used for ball playing, jogging, or rollerblading.

With an inventory of available open space resources and potential users, the adequacy of open space in the study area can be assessed both quantitatively and qualitatively. The quantitative approach computes the ratio of open space acreage to the population in the study area (i.e., acres of open space per 1,000 residents) and compares this ratio with certain guidelines. The qualitative assessment examines other factors that may affect conclusions about adequacy, including proximity to additional resources beyond the study area, the availability of private recreational facilities, and the demographic characteristics of the area's population. Specifically, the analysis in this attachment includes:

- Open space study area population. The population of the open space study area was compiled from 2016 American Community Survey (ACS) data.
- An inventory of all publicly accessible passive and active recreational facilities in the residential open space study area.
- An assessment of the quantitative ratio of open space in the study area is calculated by computing the ratio of open space acreage to the residential population in the study area and comparing this open space ratio with certain guidelines. In New York City, local open space ratios vary widely, and the median ratio at the Citywide Community District level is 1.5 acres of open space per 1,000 residents. Typically, for the assessment of both direct and indirect effects, citywide local norms have been calculated for comparison and analysis. As a planning goal, a ratio of 2.5 acres per 1,000 residents represents an area well-served by open spaces, and is consequently used as an optimal benchmark for residential populations in large-scale



- Project Site
- Study Area (Half-mile boundary)
- Open Space Study Area Boundary
- Census Tracts
- 1 Open Space Resource

0 1,000 FEET

Open Space Study Area and Resources
Figure E-1

proposals. Ideally, this would comprise 2.0 acres of active open space and 0.5 acres of passive open space per 1,000 residents. For large-scale projects (and for planning purposes), the City also seeks to attain its planning goal of a balance of 80 percent active open space and 20 percent passive open space. These goals are often not feasible for many areas of the City and they do not constitute an impact threshold. Rather, it is a benchmark that represents how well an area is served by its open space.

- An evaluation of qualitative factors affecting open space use.
- A determination of the adequacy of open space in the residential open space study area in existing conditions, the No Action condition, and the With Action condition.
- An assessment of expected changes in future levels of open space supply and demand in the 2021 analysis year, based on other planned development projects within the open space study area. To estimate the population expected in the study area in the No Action condition, an average household size of 1.79 persons is applied to the number of new DUs expected in the study area located within Manhattan CD 8.² Any new open space or recreational facilities that are anticipated to be operational by the analysis year are also accounted for. Open space ratios are calculated for No Action and With Action conditions and compared to determine changes in future levels of adequacy.

IMPACT ASSESSMENT

Impacts are based in part on how a project would change the open space ratios in the study areas as well as other qualitative considerations. According to the *CEQR Technical Manual*, a decrease in an open space ratio of 5 percent or more compared to the No Action condition is generally considered to be a significant adverse impact. If a study area exhibits a low open space ratio, indicating a shortfall of open space, smaller decreases in that ratio as a result of the action may constitute significant adverse impacts. In addition to the quantitative factors cited above, the *CEQR Technical Manual* also recommends consideration of qualitative factors in assessing the potential for open space impacts. These include the availability of nearby destination resources, the beneficial effects of new open space resources provided by a project, and the comparison of projected open space ratios with established City guidelines. As noted above, it is recognized that the open space ratios of the City guidelines presented are not feasible for many areas of the City, and they are not considered impact thresholds on their own. Rather, these are benchmarks that indicate how well an area is served by open space. When assessing the effects of a change in the open space ratio, the assessment should consider the balance of passive and active open space resources appropriate to support the affected population and the condition of existing open spaces within the study area. Determinations as to what constitutes a significant adverse open space impact are not based solely on the results of the quantitative assessment. Qualitative considerations such as the distribution of open space, whether an area is considered “well-served” or “underserved” by open space, the distance to regional parks, the connectivity of open space, and any additional open space provided by the proposed project, should be considered in a determination of significance.

² Residential population estimates resulting from the expected development projects in the study area are based on the average household size for Manhattan CD 8 (1.79 persons per household).

C. EXISTING CONDITIONS

STUDY AREA POPULATION

RESIDENTIAL (½-MILE) STUDY AREA

As shown in **Table E-1**, the open space study area has a residential population of approximately 80,579.

Table E-1
Study Area Residential Population

Census Tract	Residential Population
144.01	5,334
144.02	7,405
146.01	4,305
146.02	7,731
148.02	6,884
152	7,510
154	15,502
156.01	5,553
156.02	2,454
158.01	5,811
158.02	4,830
164	7,260
Residential Study Area Total	80,579
Note: See Figure E-1 for a map of census tracks included in the study area. Sources: U.S. Census Bureau, 2012–2016 ACS Five-Year Estimates	

STUDY AREA OPEN SPACE RESOURCES RESIDENTIAL (½-MILE) STUDY AREA

As shown in **Table E-2** and **Figure E-1**, the residential study area contains a total of approximately 22.63 acres of publicly accessible open space. Eight of the sixteen open space resources are parks or playgrounds while the remaining eight are privately owned public spaces (POPS). Of this total, approximately 7.83 acres (34.6 percent) is active space and 14.80 acres (65.4 percent) is passive space.

The largest open space resource in the study area is Carl Schurz Park, totaling 14.94 acres of open space, of which approximately 2.99 acres are active and 11.95 acres are passive. Carl Schurz Park is located to the southeast of the project site between the East River and East End Avenue, extending from East 84th Street to East 90th Street. A major feature of the park is an esplanade running along the East River which can be used for both active and passive uses. This esplanade connects to the north and the south with other sections of the Manhattan Waterfront Greenway. Other amenities include basketball courts, dog-friendly areas, playground equipment, swings, spray showers, roller hockey, water fountains, seating areas with benches, an ornamental staircase, a statue, pathways, extensively landscaped areas, and bathrooms. The park is also home to the historic Gracie Mansion, the residence of the Mayor of the City of New York. Carl Schurz Park is in good condition and experiences moderate usage.

Table E-2

Inventory of Publicly Accessible Open Space in the Residential Study Area

Map No.	Name	Location	Owner / Agency	Amenities	Total Acres	Active Acres	Passive Acres	Condition	Utilization
1	Carl Schurz Park	East End Avenue between E. 84th & E. 90th Streets	NYC Parks	Basketball courts, playground equipment, swings, roller hockey, spray showers, dog-friendly areas, water fountains, esplanade, seating areas with benches, extensive landscaping, Gracie Mansion, pathways	14.94	2.99	11.95	Good	Moderate
2	East River Waterfront Esplanade	East River/FDR Drive between E. 90th and E. 96th Streets	NYC Parks	Benches, waterfront pathways, crew-launching station	0.56	0.28	0.28	Adequate	Moderate
3	Marx Brothers Playground	Second Ave between E. 96th & E. 97th Streets	NYC Parks / DOE	Bathrooms, playground, spray showers, soccer field, benches	0.95	0.95	0.000	Good	Low
4	Stanley Isaacs Playground*	FDR Drive between E. 95th & E. 97th Streets	NYC Parks	Basketball courts, handball courts, playground equipment, swings, roller/ice hockey, water fountains, bathrooms, benches	1.23	1.11	0.12	Adequate	Low
5	Ruppert Park	Second Avenue between E. 90th & E. 91st Streets	NYC Parks	Playground equipment, spray showers, water fountains, seating areas with benches, small plazas, chess tables	1.00	0.30	0.70	Good	Heavy
6	Cherry Tree Park	Third Avenue between E. 99th & E. 100th Streets	NYC Parks	Basketball courts, handball courts, playground equipment, swings, spray showers, chess tables, seating areas with benches, bathrooms	0.95	0.71	0.24	Adequate	Low
7	Harlem RBI	E. 100th Street between First & Second Avenues	NYC Parks	Baseball field, bleachers	0.90	0.90	0.000	Good	Moderate
8	Samuel Seabury Playground	Lexington Ave between E. 95th & E. 96th Streets	NYC Parks	Basketball courts, playground equipment, swings, spray showers, a large map, seating areas with benches, bathrooms.	0.79	0.59	0.20	Good	Heavy
9	Peter D. Joseph Plaza POPS	E. 96th Street between Third & Lexington Avenues	Monterey 96 Street LLC	Seating areas with benches, planters	0.23	0.00	0.23	Excellent	Low
10	Mill Rock POPS	E. 93rd Street between First & Second Avenues	Mill Rock Owners Corp	Plaza, benches, planters	0.17	0.00	0.17	Excellent	Low
11	Charles Fatjo Plaza POPS	First Ave between E. 92nd & E. 93rd Streets	340 East 93rd Street	Benches, water fountain, planted areas, seating area with benches, small awning	0.14	0.00	0.14	Good	Moderate
12	Waterford Plaza POPS	E. 93rd Street & Second Avenue	Waterford Condominiums	Seating areas with benches, water fountains, sculpture	0.12	0.00	0.12	Excellent	Low
13	Highgate Public Plaza POPS	E. 95th Street & Third Avenue	P & S 95th Street Association	Seating area with benches, planters, water fountain	0.11	0.00	0.1	Good	Low
14	Normandie Court POPS	E. 95th Street & Second Avenue	MF Associates of New York LLC	Seating areas with benches, wall-sized water fountain, open asphalt area, planters, subway entrance	0.42	0.0	0.42	Excellent	Moderate
15	Yorkville Plaza POPS	E. 95th Street & Third Avenue	Yorkville Plaza Associates	Benches, water fountain, planters, bike parking	0.06	0.0	0.06	Excellent	Low
16	The Marmara Manhattan POPS	E. 94th Street & Second Avenue	The Marmara Manhattan	Seating area with benches, planters	0.045	0.000	0.045	Excellent	Low
Totals	N/A	N/A	N/A	N/A	22.63	7.83	14.80	N/A	N/A

Notes:See **Figure E-1** for a map of open space resources.

* The recreation area within the NYCHA Stanley M. Isaacs Houses development to the south of this playground is restricted to use by NYCHA residents and is not considered a public open space according to the CEQR Technical Manual.

Total may not sum due to rounding.

DOE = New York City Department of Education

Mill Rock Park is a park operated by NYC Parks within the study area that is located on Mill Rock, an island in the middle of the East River. This park has not been included in this open space assessment as it is not publicly accessible and does not offer any recreational space to study area residents.

Sources:

NYC Parks; Field Surveys, December 2017; MapPLUTO; CEQR No. 17DCP048M

The second largest open space resource in the study area is a section of the East River Esplanade portion of the Manhattan Waterfront Greenway that is located within the study area. This section is located to the east and north of the project site, extending from East 90th Street, where it meets Carl Schurz Park, north to East 96th Street, the edge of the study area. This section totals approximately 1.51 acres. As the esplanade can be used for both active and passive recreational uses, its acreage has been divided evenly between them. At the moment approximately 0.95 acres of this section of

the Esplanade is under construction to repair a sinkhole, a project that is expected to last until May 2018. Therefore, for existing conditions this acreage has been discounted from the quantitative analysis. The East River Esplanade continues to extend alongside the East River to the north and south of the considered section, forming a portion of the Manhattan Waterfront Greenway, a system of pathways extending around nearly the entirety of the island. Amenities along this section of the East River Esplanade include a waterfront pathway, benches, night-lighting, and a crew launching station. This section of the esplanade is in adequate condition and experiences moderate usage.

Marx Brothers Playground is an open space resource located to the northwest of the project site on Second Avenue between East 96th Street and East 97th Street. The playground totals 1.48 acres of open space, all of which is active. Amenities include a soccer field, playground equipment, spray showers, benches, and bathrooms. However, an approximately 0.53-acre area of the playground fronting Second Avenue is currently being utilized as a staging area for construction on the Second Avenue Subway project. This section of the playground contains the playground equipment, spray showers, benches, and bathrooms, leaving only the 0.95-acre soccer field available to the public at the moment. The Metropolitan Transit Authority (MTA) has committed to funding the restoration of this section of the park and vacating as soon as it is no longer needed for construction staging. The open section of the playground is in good condition and experiences low usage.

Stanley Isaacs Playground is an open space resource located to the north of the project site between the Franklin D. Roosevelt (FDR) Drive and First Avenue, extending from East 95th Street to East 97th Street. The playground totals 1.23 acres of open space, of which approximately 1.11 acres are active open space and 0.12 acres are passive open space. Amenities in the playground include basketball courts, handball courts, a roller hockey rink, playground equipment, swings, water fountains, benches, and bathrooms. Stanley Isaacs Playground is in adequate condition and experiences low usage.

Ruppert Park is an open space resource located to the west of the project site on Second Avenue between East 90th Street and East 91st Street. The park totals 1.00 acre of open space, of which approximately 0.30 acres are active and 0.70 acres are passive. The park's amenities include playground equipment, spray showers, water fountains, small plazas, seating areas with benches, chess tables, pathways, and planted areas. Ruppert Park is in good condition and experiences heavy usage.

Cherry Tree Park is an open space resource located to northwest of the project site at the northeast corner of Third Avenue and East 99th Street. The park totals 0.95 acres, of which approximately 0.71 acres are active and 0.24 acres are passive. Amenities in the park include basketball courts, handball courts, playground equipment, swings, spray showers, seating areas with benches, chess tables, and bathrooms. Cherry Tree Park is in adequate condition and experiences low usage.

Harlem RBI is an open space resource located to the north of the project site on East 100th Street between First and Second Avenues. The resource totals 0.90 acres, all of which are active. Amenities include a baseball field with bleachers. Harlem RBI is in good condition and has moderate usage.

Samuel Seabury Playground is an open space resource located to the northwest of the project site on Lexington Avenue between East 95th Street and East 96th Street. The playground totals 0.79 acres, of which 0.59 are active and 0.20 acres are passive. Amenities at the playground include basketball courts, playground equipment, swings, spray showers arranged around a large map of the world, seating areas with benches, and bathrooms. Samuel Seabury Playground is in good condition and experiences heavy usage.

Peter D. Joseph Plaza, Mill Rocks Plaza, Charles Fatjo Plaza, Waterford Public Plaza, Highgate Public Plaza, Marmara Manhattan Plaza, Normandie Court Plaza, and Yorkville Plaza are all POPS that are permanently accessible to the public through regulatory approvals. These spaces

range from 0.06 to 0.23 acres in size, are all entirely passive, and contain amenities such as seating areas with benches, water fountains, planters, bike racks, and sometimes small awnings. All are in good to excellent condition and experience low to moderate usage.

A full list of these spaces and their amenities, condition, and utilization can be found above in **Table E-2**.

ASSESSMENT OF OPEN SPACE ADEQUACY

RESIDENTIAL (½-MILE) STUDY AREA

The following analysis of the adequacy of open space resources within the residential study area presents the ratios of active, passive, and total open space resources per 1,000 residents.

Quantitative Assessment

The study area has an overall open space ratio of 0.281 acres per 1,000 residents (see **Table E-3**). This is lower than the City's planning guideline of 2.5 acres per 1,000 residents. The study area's passive and active open space ratios are 0.097 acres and 0.184 acres per 1,000 residents, respectively, which also do not meet the *CEQR Technical Manual* guidelines of 2.0 acres of active open space and 0.5 acres of passive open space per 1,000 residents.

Table E-3
Adequacy of Study Area Open Space Resources: Existing Conditions

Existing Residential Population	Open Space Acreage			Open Space Ratios per 1,000 Persons			City Open Space Guidelines		
	Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
80,579	22.63	7.83	14.80	0.281	0.097	0.184	2.50	2.00	0.50

Qualitative Assessment

There are several additional open space resources located within the study area or just outside of it that would be readily accessible to residents of the study area. These include open spaces within NYCHA developments that generally offer access to playground and basketball courts, with some benches for seating. NYCHA developments with these open spaces in the study area include Holmes Towers development, the Stanley M. Isaacs Houses, the George Washington Houses, and Metro North Plaza. All of these are located to the north of the project site. These facilities are excluded from the quantitative analysis because they are generally for the sole use of NYCHA residents; however, certain areas of NYCHA open space such as seating areas are accessible to the public and could be utilized by residents within the study area, and these areas provide open space resources to the population of the NYCHA housing development. Furthermore, many of the study area open space resources were observed to have low or moderate utilization.

Randall's Island Park is another large open space resource located just over ½-mile away from the project site accessible via the East 103rd Street Footbridge. Randall's Island Park contains 256 acres of active and passive open space on an island in the East River. Its amenities include bicycling and greenways, baseball fields, soccer fields, cricket fields, football fields, tennis courts, running tracks, golf courses, dog-friendly areas, and barbecuing areas. Randall's Island Park is a destination open space resource and would draw many of the residents of the study area to its ample spaces, for which residents would be willing to travel more than ½-mile to utilize. Central Park, another major destination open space resource with ample amenities is located approximately ¾-mile to the west of the project site, and

would draw many residents within the study area. The East River Esplanade also continues to extend alongside the East River to the north and south of the section considered in the quantitative analysis.

Finally there are a number of privately owned open space resources in the area that provide recreation opportunities to the public at large. These include Asphalt Green, a nonprofit organization that provides sports, swim, and fitness instruction and programs to New York City children and adults and operates a recreation facility nearby the project site at 555 East 90th Street. The facility is publicly-owned, and is operated by Asphalt Green through a partnership arrangement with NYC Parks. This facility includes a pool, tennis court, soccer field, playground, and other recreational amenities. The organization offers free and low-cost community programs to provide fitness to under-served populations. These programs include free swim classes for public school children, free sports leagues for middle school children, and free fitness classes for seniors.

D. FUTURE WITHOUT THE PROPOSED PROJECT

In the No Action condition, the project site is expected to remain in its existing condition and no new development would occur.

STUDY AREA POPULATION

No new residents would be added to the project site in the No Action condition as no development would occur. However, there are 16 known development projects within the study area that are anticipated to add 1,464 additional residents to the study area by 2021. This would increase the total population of the study area in the No Action condition to 82,043.

STUDY AREA OPEN SPACE RESOURCES

There would be several changes to existing open space resources by 2021 in the No Action condition. The portion of the East River Esplanade that is currently undergoing reconstruction would reopen, increasing the size of that resource by 0.952 acres from 0.559 acres to 1.542 acres. This would add an additional 0.476 acres of active open space and 0.476 acres of passive open space to the study area.

The Marx Brothers Playground, totaling 1.48 acres (of which 0.53 acres are currently being used for construction staging by the Second Avenue Subway project) will undergo redevelopment as part of the New York City Education Construction Fund (ECF) East 96th Street project (CEQR #16ECF001M). Though the project will replace the Marx Brothers Playground with a new playground of the same size on the same block, it will not be complete until 2023, after the proposed project's analysis year. Therefore, neither the 0.95 acres of the Marx Brothers Playground that are currently open nor its full 1.48-acre sized replacement have been included in the quantitative assessment of the No Action condition.

ASSESSMENT OF OPEN SPACE ADEQUACY

RESIDENTIAL (1/2-MILE) STUDY AREA

Quantitative Assessment

As shown below in **Table E-4**, in the No Action condition, the total open space ratio is projected to be 0.276 acres per 1,000 residents. The active open space ratio and passive open space ratios are projected to be 0.090 acres and 0.186 acres per 1,000 residents, respectively. Similar to existing conditions, the total, active, and passive open space ratios would continue to be below the City's guidelines.

Table E-4

Adequacy of Study Area Open Space Resources: No Action Condition

2021 Residential Population	Open Space Acreage			Open Space Ratios per 1,000 Persons			City Open Space Guidelines		
	Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
82,043	22.63	7.36	15.274	0.276	0.090	0.186	2.50	2.00	0.50

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT**STUDY AREA POPULATION**

The proposed project would result in an incremental development of 339 DUs compared to the No Action condition, which would introduce 607 residents to the study area, resulting in a total population of 82,650 residents with the proposed project.

STUDY AREA OPEN SPACE RESOURCES

Study area open space resources are expected to undergo the same changes that would be experienced under the No Action condition. This includes the reopening of 0.952 acres of East River Esplanade space and the loss of the 0.952 acres of the Marx Brothers Playground that are currently open, which would not be replaced until 2023, after the proposed project's analysis year.

ASSESSMENT OF OPEN SPACE ADEQUACY*RESIDENTIAL (½-MILE) STUDY AREA**Quantitative Assessment*

As shown below in **Table E-5**, in the With Action condition the total open space ratio is projected to fall from 0.276 acres per 1,000 residents to 0.274 acres per 1,000 residents. The active open space ratio is projected to decrease from 0.090 acres per 1,000 residents to 0.089 acres per 1,000 residents, and the passive open space ratio is projected to decrease from 0.186 acres per 1,000 residents to 0.185 acres per 1,000 residents. As in the No Action condition, all of these open space ratios would remain below the City guidelines of 2.5 acres of total open space per 1,000 residents, 0.5 acres of passive open space per 1,000 residents, and 2.0 acres of active open space per 1,000 residents. Compared to the No Action condition, the total open space ratio would decrease by 0.72 percent, the active open space ratio would decrease by 1.11 percent, and the passive open space ratio would decrease by 0.52 percent (see **Table E-6**).

Table E-5

Adequacy of Study Area Open Space Resources: With Action Condition

2021 Residential Population	Open Space Acreage			Open Space Ratios per 1,000 Persons			City Open Space Guidelines		
	Total	Passive	Active	Total	Active	Passive	Total	Active	Passive
82,650	22.63	7.36	15.27	0.274	0.089	0.185	2.50	2.00	0.50

Table E-6
Study Area Open Space Ratio Summary

Ratio	City Open Space Guideline	Open Space Ratios per 1,000		Percent Change (Future No Action to Future With Action)*
		No Action	With Action	
Total—Residents	2.5	0.276	0.274	-0.72%
Active—Residents	0.5	0.090	0.089	-1.11%
Passive—Residents	2.0	0.186	0.185	-0.54%
Note: * Decrease in open space ratio may not be apparent due to rounding.				

Qualitative Assessment

Similar changes to open space resources within the study area would occur in the With Action condition as those that would occur in the No Action condition. A portion of the East River Esplanade currently closed for reconstruction would reopen and the Marx Brothers Playground would close for the development of the ECF 96th Street project. The remainder of the open space resources within the study area and the additional open space resources located outside of the study area that residents would likely utilize, such as NYCHA recreation spaces, Randall's Island Park, and Central Park would also remain available in the With Action condition.

A new open space resource located outside of the study area but within a ½-mile of the project site would also be available for study area residents. Playground 103 CIII is a 1.05-acre playground, located next to the FDR Drive just north of East 102nd Street. It was recently reconstructed and upgraded as part of an NYC Parks capital project. The upgraded playground includes brand new playground equipment, swings, tricycle track, hopscotch, adult-exercise equipment, basketball courts, spray showers, planted areas, chess tables, seating areas with benches, as well as access to Randall's Island Park via the 103rd Street Footbridge.

The proposed project would also remove two existing play areas that serve the Holmes Towers development from the project site. Field observations conducted in December 2017 showed the playground to have playground equipment and a seating area with benches. It was in adequate condition and experienced low utilization. Under the With Action condition, the proposed project would construct three new and improved play areas within the Holmes Towers development to replace these existing play areas. The proposed project would also provide walkway and landscaping improvements around and between the existing buildings, along with improved seating areas and lighting.

The proposed project would also provide a new community facility use operated by Asphalt Green. This facility would include a gymnasium and rooftop playing field and would provide additional recreation opportunities for the surrounding community. The proposed project would also provide recreation amenities, such as fitness centers, for building residents.

DETERMINING IMPACT SIGNIFICANCE

According to the *CEQR Technical Manual*, if the decrease in the open space ratio approaches or exceeds 5 percent, it is generally considered a substantial change. However, the change in the open space ratio should be balanced against how well-served an area is with open space. If the study area exhibits a low open space ratio, even a small decrease may be substantial. Likewise, if the study area exhibits an open space ratio that approaches or exceeds the planning goal of 2.5 acres per 1,000 residents, a greater percentage of change in the ratio may be acceptable.

Although the study area would have low open space ratios in both the No Action and With Action conditions, the small decreases associated with the proposed project would not constitute a significant adverse impact. Many of the study area open space resources were observed to have low utilization and additional resources are located just outside the study area, including notable open spaces such as Randall's Island Park and Central Park. The proposed project's new residents would also likely make use of the proposed building's recreational amenity space. This would further reduce the burden on open space resources in the study area. **Table E-6** shows the percentage change from the No Action condition to the With Action condition for the open space study area.

Though all of the open space ratios in the study area would be below the City's guidelines, the proposed project would reduce open space ratios by a maximum of 1.11 percent, well below the *CEQR Technical Manual* threshold of a 5 percent reduction in an open space ratio to constitute a significant adverse impact. The open space study area is projected to experience shortfalls in all categories of open space in the No Action condition, but the shortfall would not be substantially increased by the proposed project, nor is the project site located in an area of the Manhattan that is considered "underserved" by the City. Furthermore, residents of the study area and of the proposed project would have access to several additional open space resources such as Randall's Island Park, Central Park, and NYCHA recreation spaces near or within the study area that have not been included in the quantitative assessment but would be available for use. Therefore, the proposed project would not result in significant adverse impacts on open space resources. *

A. INTRODUCTION

This attachment examines whether the proposed actions would result in a significant adverse shadow impact on any sunlight-sensitive resources. According to the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, sunlight-sensitive resources of concern can include publicly accessible open space, Greenstreets, sunlight-dependent features of historic architectural resources, and natural resources. A shadow assessment is required for actions that would result in new structures or additions to existing structures at least 50 feet in height.

The proposed actions would facilitate the development of a mixed-use residential and community facility building (the “proposed project”) at a site on the northern side of East 92nd Street between First and York Avenues (a portion of Block 1573, Lot 20; the “project site”) in the Yorkville neighborhood of Manhattan, Community District 8. The proposed building, including rooftop mechanical equipment, would rise to a maximum height of approximately 530 feet above street level in the future with the proposed project (the “With Action” condition). In the future without the proposed project (the “No Action” condition), the project site would remain in its current condition with landscaping, walkways, and play areas serving the New York City Housing Authority (NYCHA) John Haynes Holmes Towers development.

A detailed shadow analysis determines that the proposed project would cast new shadow on ten sunlight-sensitive resources, including seven publicly accessible open spaces, two Greenstreets, and one natural resource—the East River. However, the incremental shadow cast on the affected resources would either be short in duration or would only cover a small area compared to the total size of the resource. The proposed project’s shadow would not significantly diminish the usability of any of the resources or threaten their ability to support vegetation and would not alter the microclimate of the East River. Therefore, the proposed project would not result in a significant shadow impact on any sunlight-sensitive resources.

B. DEFINITIONS AND METHODOLOGY

This analysis has been prepared in accordance with CEQR procedures and follows the guidelines of the *CEQR Technical Manual*.

DEFINITIONS

Incremental shadow is the additional, or new, shadow that a structure resulting from a proposed project would cast on a sunlight-sensitive resource.

Sunlight-sensitive resources are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource’s usability or architectural integrity. Such resources generally include:

- *Public open space* such as parks, beaches, playgrounds, plazas, schoolyards (if open to the public during non-school hours), greenways, and landscaped medians with seating. Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources.
- *Features of architectural resources that depend on sunlight for their enjoyment by the public.* Only the sunlight-sensitive features need be considered, as opposed to the entire resource. Such sunlight-sensitive features might include design elements that depend on the contrast between light and dark (e.g., recessed balconies, arcades, deep window reveals); elaborate, highly carved ornamentation; stained glass windows; historic landscapes and scenic landmarks; and features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as a historic landmark.
- *Natural resources* where the introduction of shadows could alter the resource's condition or microclimate. Such resources could include surface water bodies, wetlands, or designated resources such as coastal fish and wildlife habitats.

Non-sunlight-sensitive resources include, for the purposes of CEQR:

- City streets and sidewalks (except Greenstreets);
- *Private open space* (e.g., front and back yards, stoops, vacant lots, and any private, non-publicly accessible open space, such as private open space that is accessory to NYCHA housing developments);
- *Project-generated open space* cannot experience a significant adverse shadow impact from the project, according to CEQR, because without the project the open space would not exist.

A significant adverse shadow impact occurs when the incremental shadow added by a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources. Each case must be considered on its own merits based on the extent and duration of new shadow and an analysis of the resource's sensitivity to reduced sunlight.

METHODOLOGY

Following the guidelines of the *CEQR Technical Manual*, a preliminary screening assessment is first conducted to determine whether project-generated shadow could reach any sunlight-sensitive resources at any time of year. The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the project site representing the longest shadow that could be cast. If there are sunlight-sensitive resources within this radius, the analysis proceeds to the second tier, which reduces the area that could be affected by the project shadow by accounting for the fact that shadows can never be cast between a certain range of angles south of the project site due to the path of the sun through the sky at the latitude of New York City.

If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by proposed project shadow by looking at specific representative days in each season and determining the maximum extent of shadow over the course of each representative day.

If the third tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow cast by the proposed building. The detailed analysis provides the data needed to assess the shadow impacts. The effects of the new shadows on the sunlight-sensitive resources are

described, and their degree of significance is considered. The results of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text.

C. PRELIMINARY SCREENING ASSESSMENT

A base map was developed using Geographic Information Systems (GIS)¹ showing the location of the proposed project and the surrounding street layout (see **Figure F-1**). In coordination with the land use, open space, and historic and cultural resources assessments presented this Environmental Assessment Statement (EAS; see Attachment B, “Land Use, Zoning, and Public Policy,” Attachment E, “Open Space,” and Attachment G, “Historic and Cultural Resources”), potential sunlight-sensitive resources were identified and shown on the map.

TIER 1 SCREENING ASSESSMENT

For the Tier 1 assessment, the longest shadow that the proposed project could cast is calculated, and, using this length as the radius, a perimeter is drawn around the project site. Anything outside this perimeter representing the longest possible shadow count never be cast in shadows originating from the proposed project, while anything inside the perimeter needs additional assessment. According to the *CEQR Technical Manual*, the longest shadow that a structure can cast at the latitude of New York City occurs on December 21, the winter solstice, at the start of the analysis day at 8:51 AM, and is equal to 4.3 times the height of the structure.

PROPOSED PROJECT

Including rooftop mechanical equipment, the proposed project would reach a maximum height of approximately 530 feet above street level, which could cast a shadow up to 4.3 times as long, or approximately 2,279 feet. Using this length as the radius, a perimeter was drawn around the project site (see **Figure F-1**). Although no architectural resources were identified within the longest shadow study area, sunlight-sensitive open spaces, Greenstreets, and the East River are within the longest shadow study and require a Tier 2 assessment.

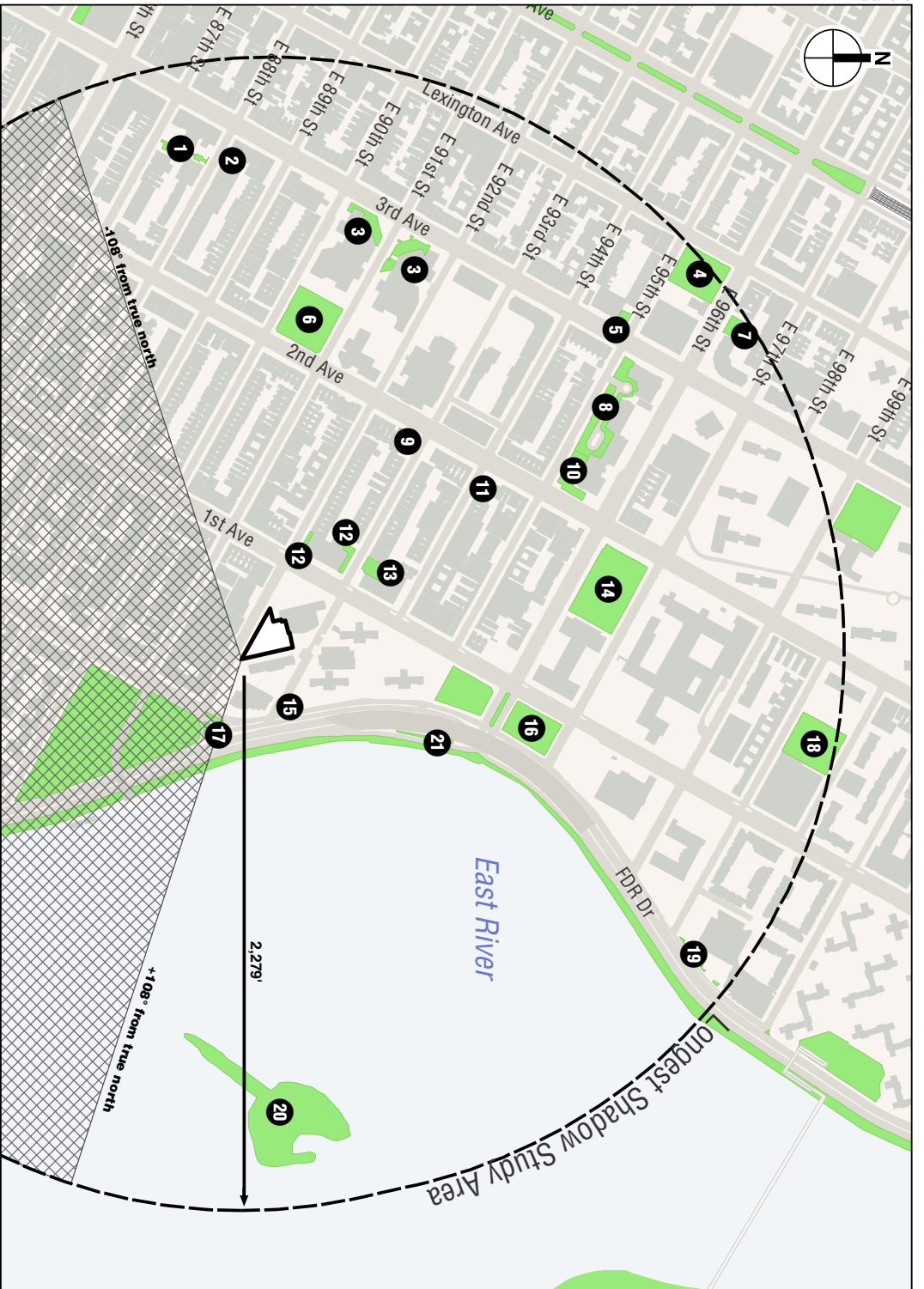
TIER 2 SCREENING ASSESSMENT

Because of the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, this area lies between -108 and +108 degrees from true north. **Figure F-1** illustrates this triangular south of the project site. The complementing area to the north represents the portion of the longest shadow study area that could potentially experience new shadow from the proposed project. As illustrated in **Figure F-1**, the Tier 2 assessment identified several sunlight-sensitive resources that could be potentially affected by new shadow from the proposed project. Therefore, a Tier 3 assessment is required to model new shadows on specific representative days of the year for the proposed project.

TIER 3 SCREENING ASSESSMENT

The direction and length of shadows vary throughout the course of the day and also differ depending on the season. Shadows move constantly but more quickly at the start and end of the day than they do in the middle of the day. In order to determine whether project-generated shadow

¹ Software: Esri ArcGIS 10.3; Data: New York City Department of Information Technology and Telecommunications (DoITT) and other City agencies, and AKRF site visits.



1. 201 East 87th Street POPS
2. 200 East 89th Street POPS
3. East 91 & 3rd Ave Garden Plots
4. Samuel Seabury Playground
5. Highgate Public Plaza POPS
6. Ruppert Park
7. Peter D. Joseph Plaza POPS
8. Yorkville Plaza POPS
9. Waterford Plaza POPS
10. Normandie Court POPS
11. Marmara Manhattan POPS
12. Charles Faljo Plaza POPS
13. Mill Rock POPS
14. Marx Brothers Playground
15. FDR Drive & 93rd Street
16. Stanley Isaacs Playground & Greenstreet
17. York Avenue Greenstreet
18. Harlem RBI
19. FDR Greenstreets
20. Mill Rock Park
21. East River Waterfront Esplanade
23. East River

- Project Site
- Tier 1: Proposed Project longest shadow study area
- Tier 2: Area south of site that could never be shaded by proposed building
- Sunlight-Sensitive Open Space or Greenstreet
- Sunlight-Sensitive Natural Resource

Note: There are no historic resources with sunlight-sensitive features located within the longest shadow study area.

BELWETHER AT YORKVILLE

Tier 1 and Tier 2 Assessments
Figure F-1

could fall on a sunlight-sensitive resource, three-dimensional computer mapping software is used in the Tier 3 assessment to calculate and display the incremental shadows from the proposed project on individual representative days of the year. A computer model was developed containing three-dimensional representations of elements in the base map used in the preceding assessments, the topographic information of the study area, and the massing of the proposed project.

REPRESENTATIVE DAYS FOR ANALYSIS

Following the guidance of the *CEQR Technical Manual*, shadows on the summer solstice (June 21), winter solstice (December 21), and spring and fall equinoxes (March 21 and September 21, which are approximately the same in terms of shadow patterns) are modeled, to represent the range of shadows over the course of the year. An additional representative day during the growing season is also modeled, the day halfway between the summer solstice and the equinoxes, i.e., May 6 or August 6, which have approximately the same shadow patterns.

TIMEFRAME WINDOW OF ANALYSIS

The shadow assessment considers shadows occurring between 90 minutes after sunrise and 90 minutes before sunset. Within the 90 minutes after sunrise and the 90 minutes before sunset, the sun is low on the horizon, producing shadows that are very long, move fast, and generally blend with shadows from existing structures. Consequently, shadows occurring in these two 90-minute periods are not considered significant under CEQR, and their assessment is not required.

TIER 3 SCREENING ASSESSMENT RESULTS

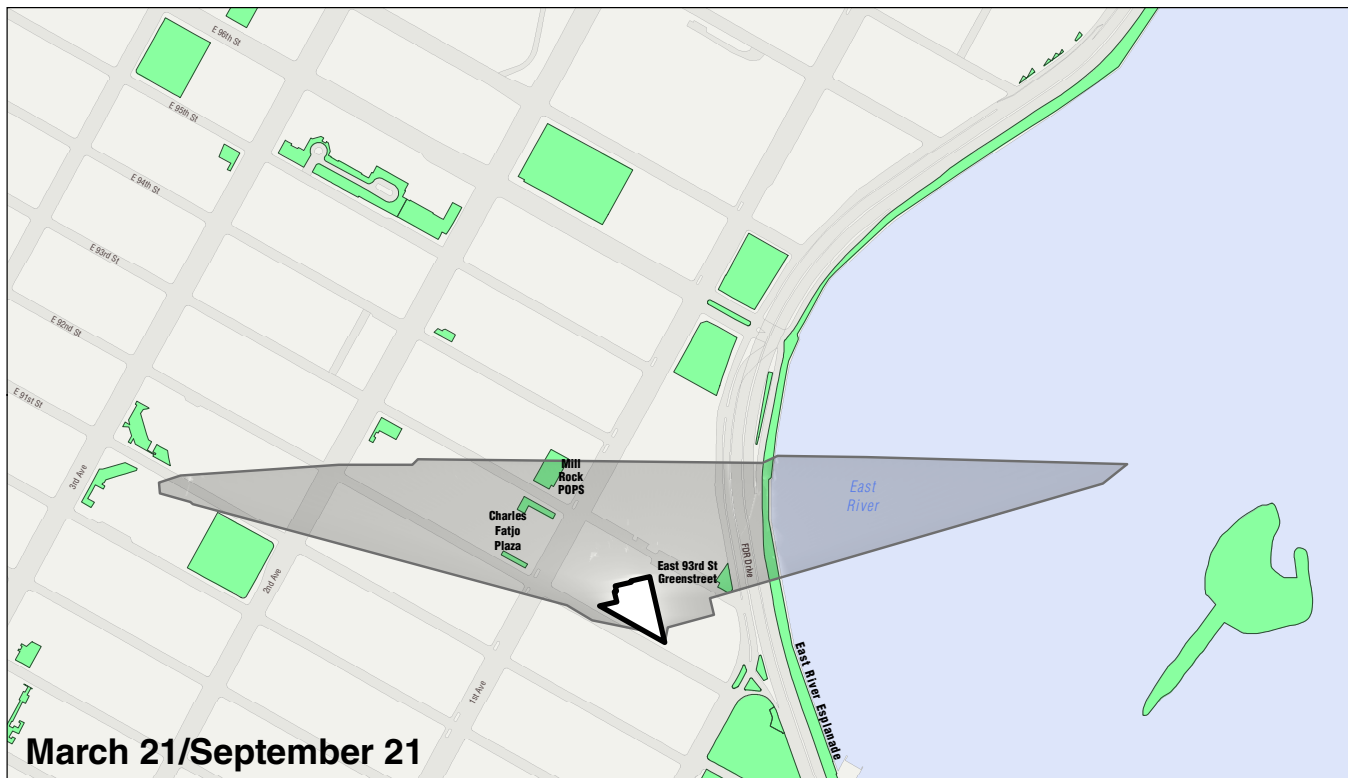
Figures F-2 and F-3 illustrates the range of shadows that would occur, in the absence of intervening buildings, from the proposed project. The extent of the shadow is shown between the start of the analysis day (90 minutes after sunrise) to the end of the analysis day (90 minutes before sunset). The Tier 3 assessment finds that on all 4 analysis days proposed project shadow could reach several open space resources, Greenstreets, and the East River. Therefore, the extent and duration of the incremental shadows originating from the proposed project on all resources identified in the Tier 3 assessment are determined with a detailed shadow analysis.

D. DETAILED ANALYSIS

The purpose of the detailed shadow analysis is to determine the extent and duration of incremental shadows that would fall on the sunlight-sensitive resources identified in the Tier 3 assessment. To complete the analysis, three-dimensional representations of existing buildings and planned future developments are appended to the Tier 3 assessment model. The shadows cast in the No Action condition can then be compared to those cast in the With Action condition.

ANALYSIS RESULTS

The detailed shadow analysis finds that new shadows originating from the proposed project would fall on several publicly accessible open spaces, Greenstreets, and the East River. **Table F-1** shows the entry and exit times and total duration of incremental shadow originating from the proposed project on the affected resources.



 Project Site

Notes:
 1. Daylight Saving Time not used.
 2. Shadows are shown occurring at approximately one hour intervals from the start of the analysis day (one and a half hours after sunrise) to the end of the analysis day (one and a half hours before sunset). The Tier 3 assessment serves to illustrate the daily path or "sweep" of the proposed project's shadow across the landscape, without accounting for any existing buildings and their shadows.

0 1,000 FEET



 *Project Site*

Notes:
 1. Daylight Saving Time not used.
 2. Shadows are shown occurring at approximately one hour intervals from the start of the analysis day (one and a half hours after sunrise) to the end of the analysis day (one and a half hours before sunset). The Tier 3 assessment serves to illustrate the daily path or "sweep" of the proposed project's shadow across the landscape, without accounting for any existing buildings and their shadows.

0 500 FEET


Table F-1
Incremental Shadow Durations

Analysis day and timeframe window	March 21 / Sept. 21 7:36 AM–4:29 PM	May 6 / August 6 6:27 AM–5:18 PM	June 21 5:57 AM–6:01 PM	December 21 8:51 AM–2:53 PM
East River	2:05 PM–4:29 PM Total: 2 hr 24 min	2:20 PM–5:18 PM Total: 2 hr 58 min	2:50 PM–6:01 PM Total: 3 hr 11 min	1:50 PM–2:53 PM Total: 1 hr 3 min
East River Esplanade	2:00 PM–3:05 PM Total: 1 hr 05 min	2:10 PM–3:45 AM Total: 1 hr 25 min	2:40 PM–4:00 PM Total: 1 hr 20 min	1:45 PM–2:53 PM Total: 1 hr 8 min
Stanley Isaacs Playground & Greenstreet*	—	—	—	12:20 PM–1:40 PM Total: 1 hr 20 min
Charles Fatjo Plaza POPS	8:30 AM–8:50 AM 10:05 AM–10:35 AM Total: 0 hr 50 min	8:30 AM–9:40 AM Total: 1 hr 10 min	9:10 AM–9:55 AM Total: 0 hr 50 min	—
Mill Rock POPS	10:00 AM–11:10 AM Total: 1 hr 10 min	—	—	9:25 AM–9:50 AM Total: 25 min
Normandie Court POPS	—	—	—	9:40 AM–10:15 AM Total: 25 min
Yorkville Plaza POPS	—	—	—	9:40 AM–9:50 AM Total: 10 min
East 93rd Greenstreet	—	1:55 PM–2:20 PM Total: 0 hr 25 min	1:45 PM–2:45 PM Total: 1 hr 0 min	—
Notes: POPS = privately owned public space Table indicates entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource. Daylight saving time is not used—times are Eastern Standard Time, per <i>CEQR Technical Manual</i> guidelines. However, as Eastern Daylight Time is in effect for the March/September, May/August, and June analysis periods, add 1 hour to the given times to determine the actual clock time. * The recreation area within the NYCHA Stanley M. Isaacs Houses development to the south of this playground is restricted to use by NYCHA residents and is not considered a sunlight-sensitive public open space according to the <i>CEQR Technical Manual</i> .				

Figure F-4 through F-15 illustrate the duration of shadows and direct sunlight on the affected resources in the No Action and With Action conditions. The area of the resource affected by the incremental shadow is outlined in red. Below is a description of the resources, the duration and extent of incremental shadow at each resource, and a determination of significance for each resources.

AFFECTED RESOURCES

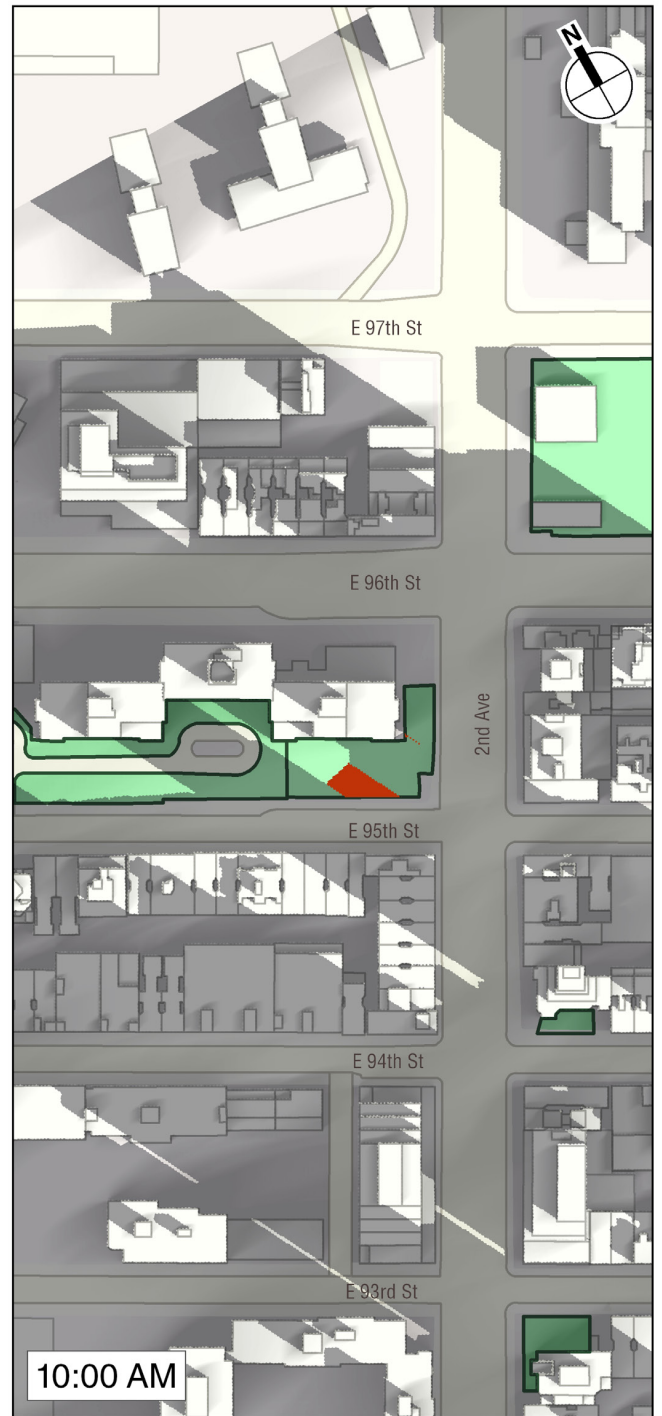
Normandie Court POPS (see Figure F-4)

Normandie Court POPS is an approximately 0.4-acre POPS located adjacent to the northwest corner of East 95th Street and Second Avenue. Sunlight-sensitive features within the resource include benches, seating areas and landscaping. This open space resource is in excellent condition and has moderate utilization.

With the proposed actions, Normandie Court POPS would be cast in new shadow on 1 of the 4 analysis days.

December 21 (see Figure F-4)

From 9:40 AM to 10:15 AM, shadow cast by the proposed project would fall partially on the benches and vegetation located within Normandie Court POPS.



0 200 FEET

- Sunlight-Sensitive Resource
- Existing and No Action Shadow
- Incremental Shadow on Resource
- Direct Sunlight on Resource







0 200 FEET

- Sunlight-Sensitive Resource
- Existing and No Action Shadow
- Incremental Shadow on Resource
- Direct Sunlight on Resource

4/12/2018



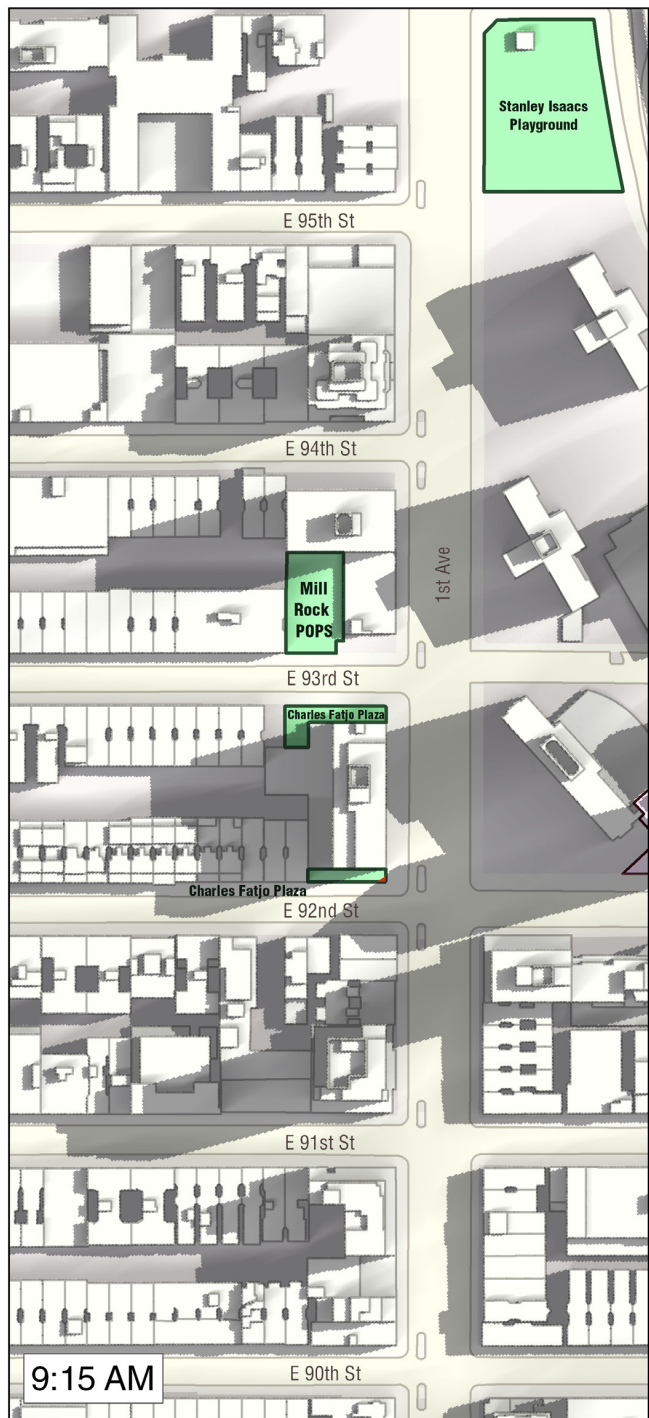
0 200 FEET

-  Sunlight-Sensitive Resource
-  Existing and No Action Shadow
-  Incremental Shadow on Resource
-  Direct Sunlight on Resource





BELLWETHER AT YORKVILLE

Detailed Analysis
May 6/August 6
Figure F-6

4/12/2018



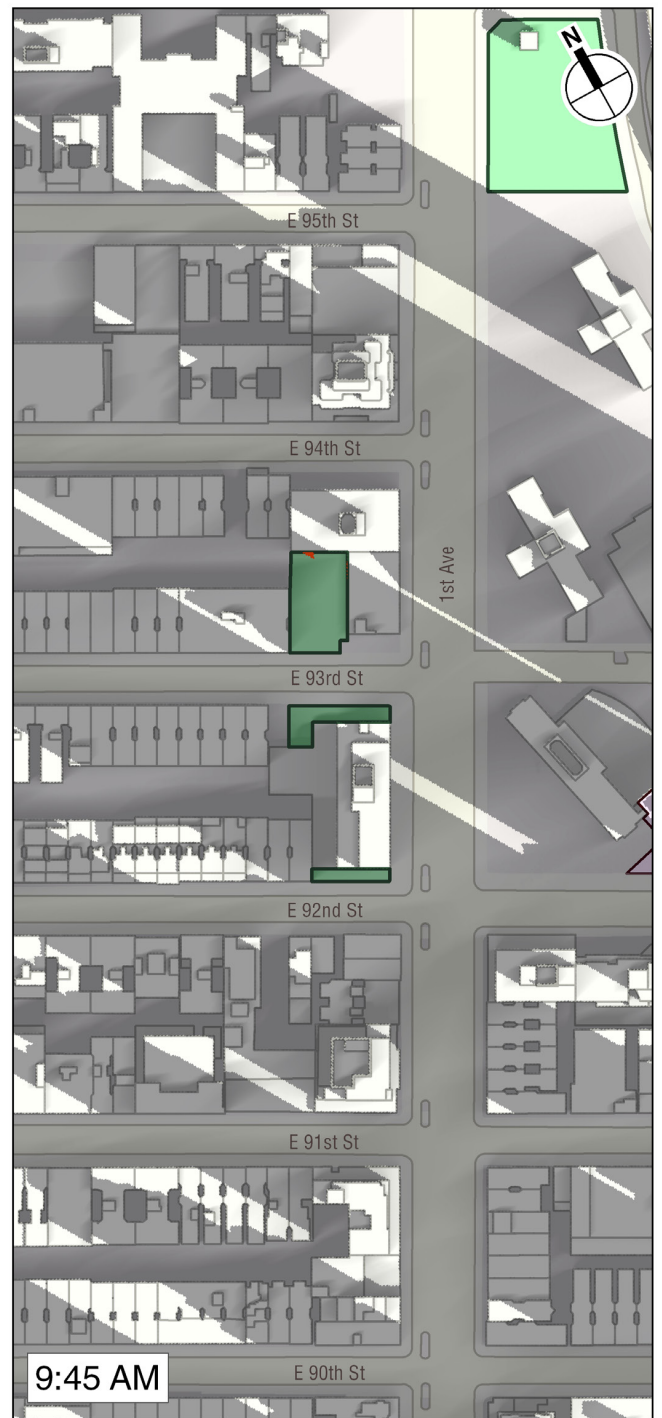
0 200 FEET

-  Sunlight-Sensitive Resource
-  Existing and No Action Shadow
-  Incremental Shadow on Resource
-  Direct Sunlight on Resource





BELLWETHER AT YORKVILLE

Detailed Analysis
June 21
Figure F-7

4/12/2018

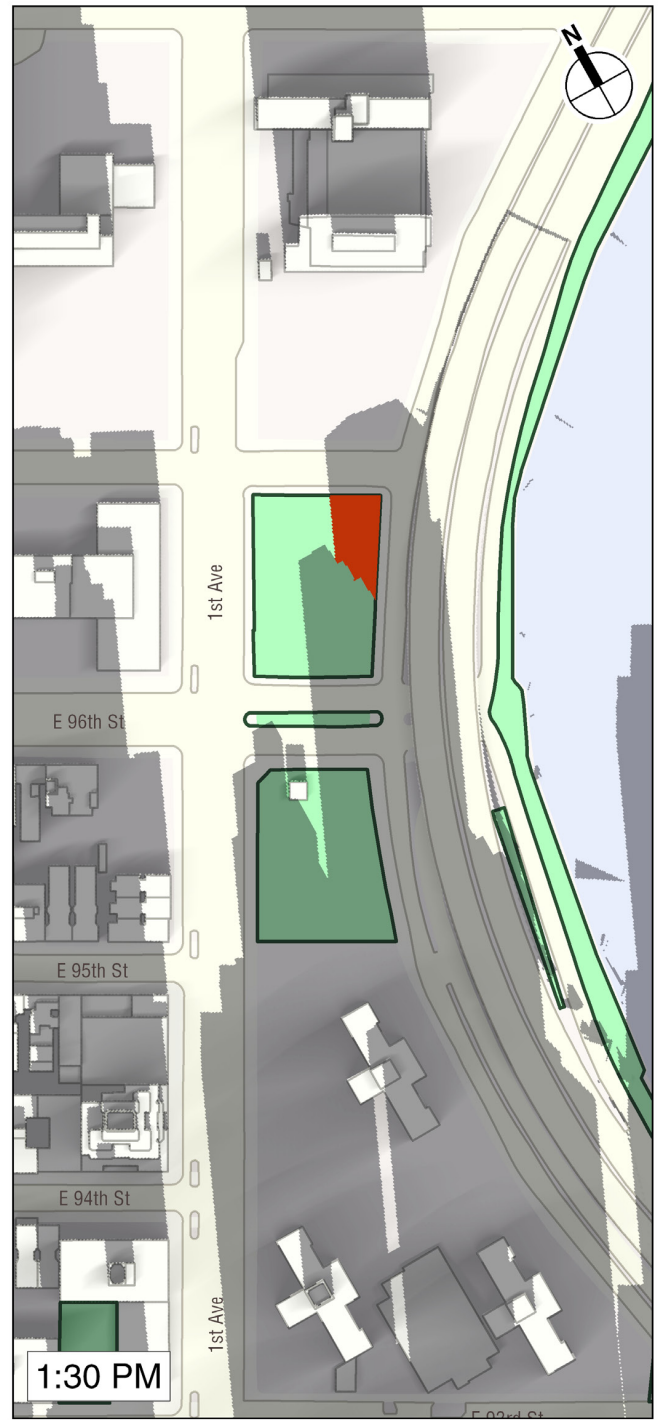
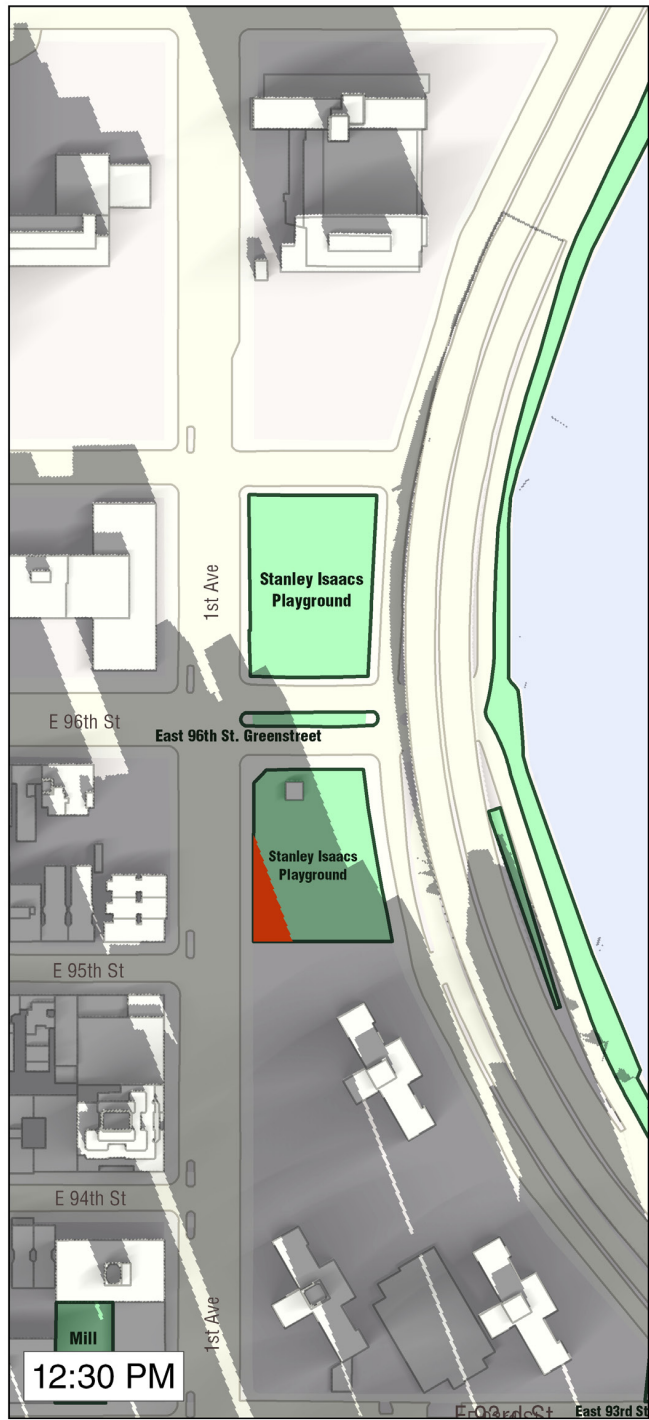


0 200 FEET

-  Sunlight-Sensitive Resource
-  Existing and No Action Shadow
-  Incremental Shadow on Resource
-  Direct Sunlight on Resource

BELLWETHER AT YORKVILLE

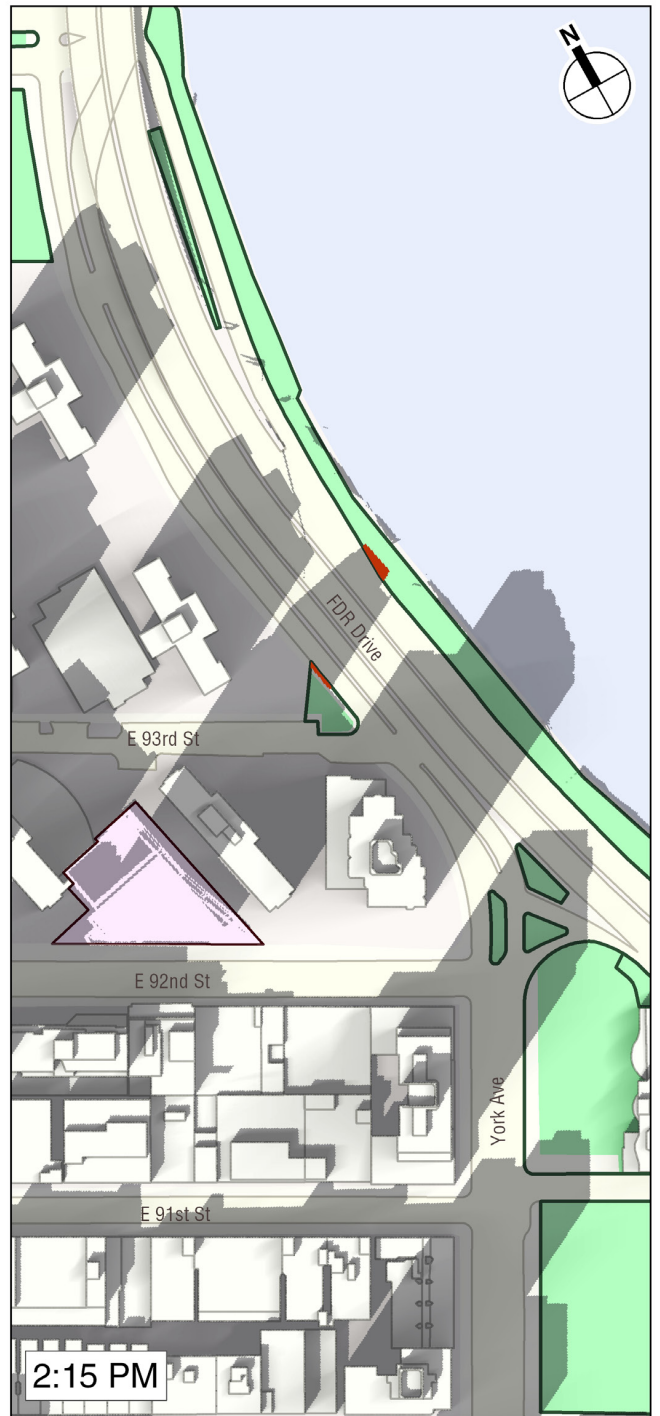
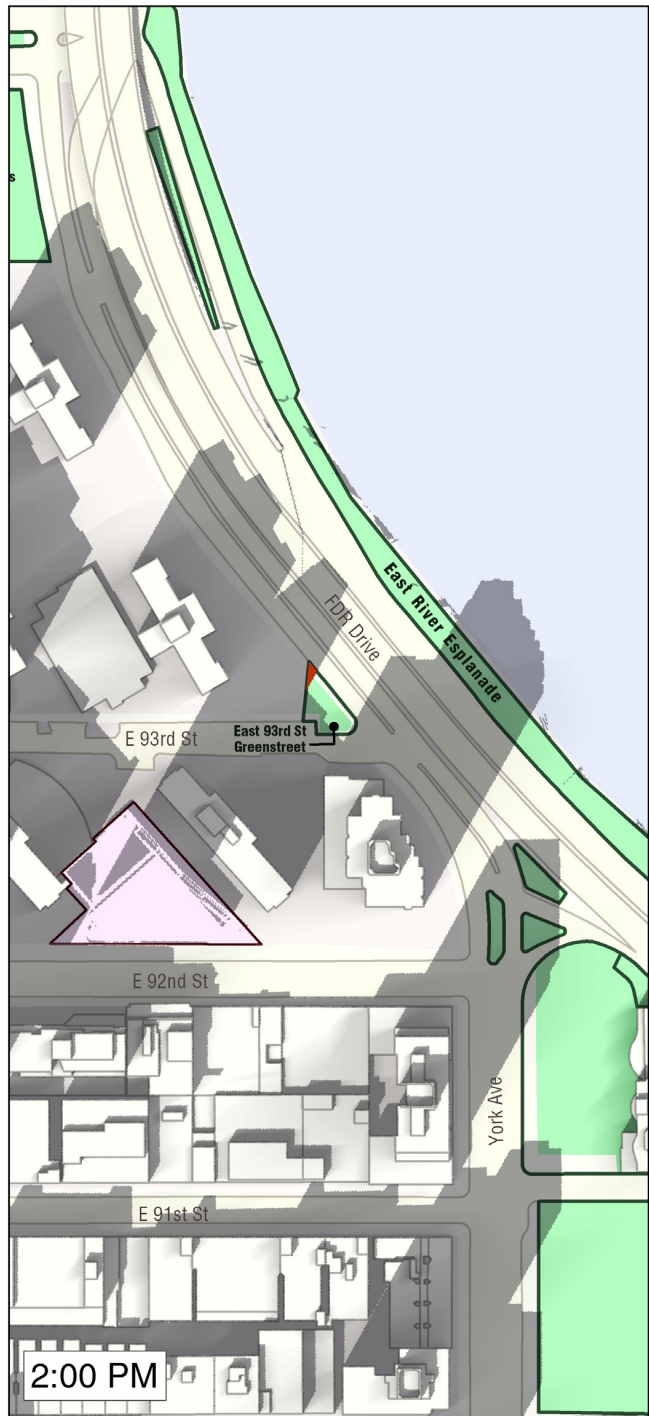
Detailed Analysis
December 21
Figure F-8



0 200 FEET

- Sunlight-Sensitive Resource
- Existing and No Action Shadow
- Incremental Shadow on Resource
- Direct Sunlight on Resource

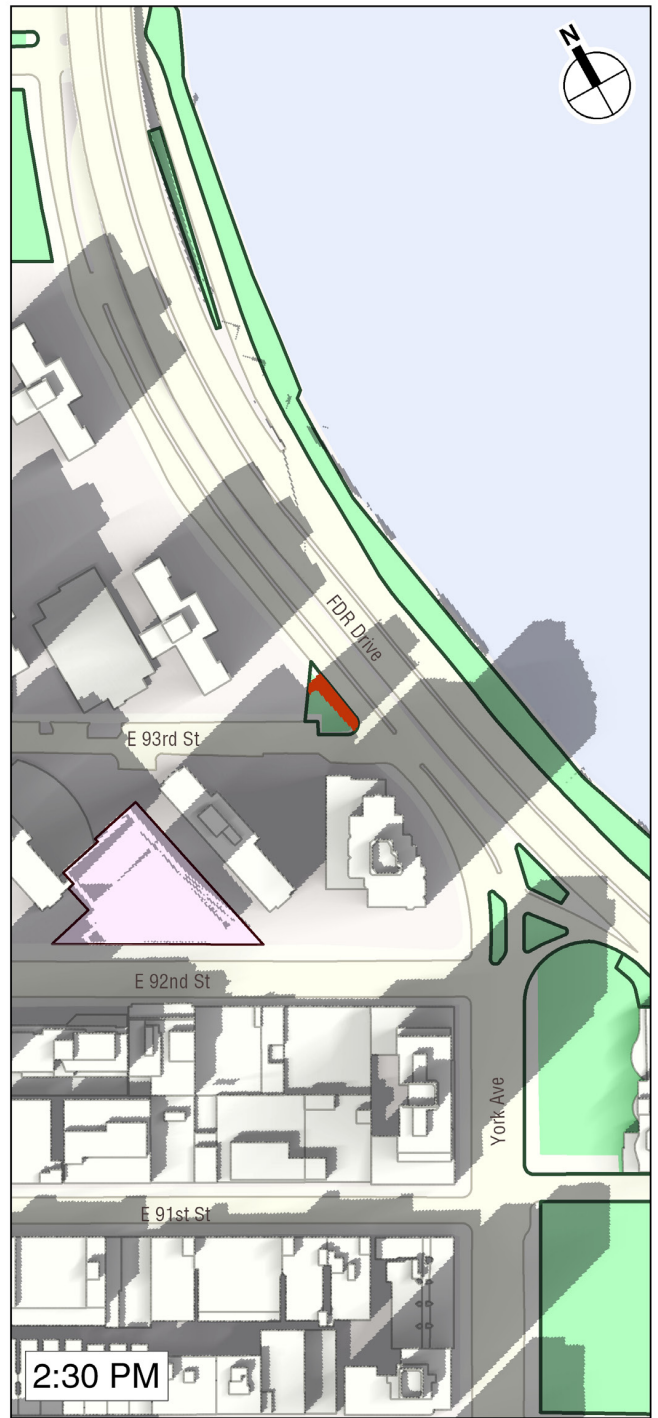
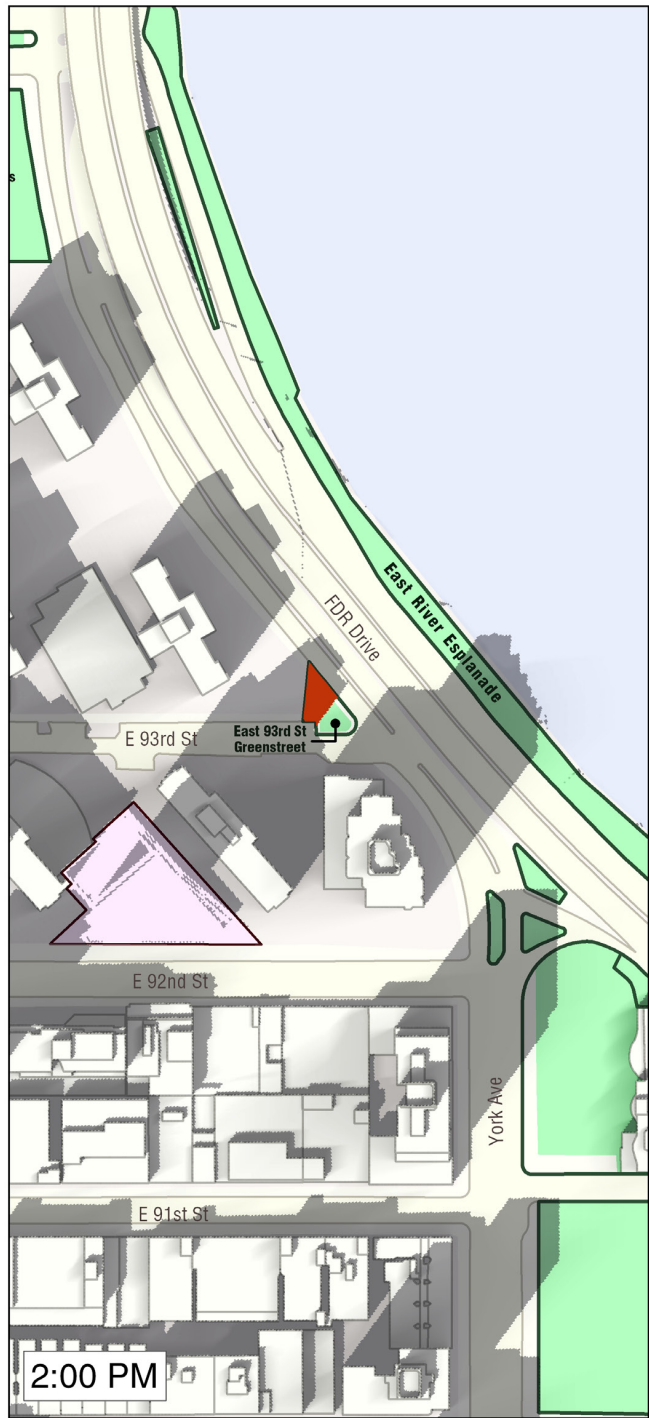
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




- Project Site
- Sunlight-Sensitive Resource
- Existing and No Action Shadow
- Incremental Shadow on Resource
- Direct Sunlight on Resource

Detailed Analysis
May 6/August 6
Figure F-10

4/12/2018

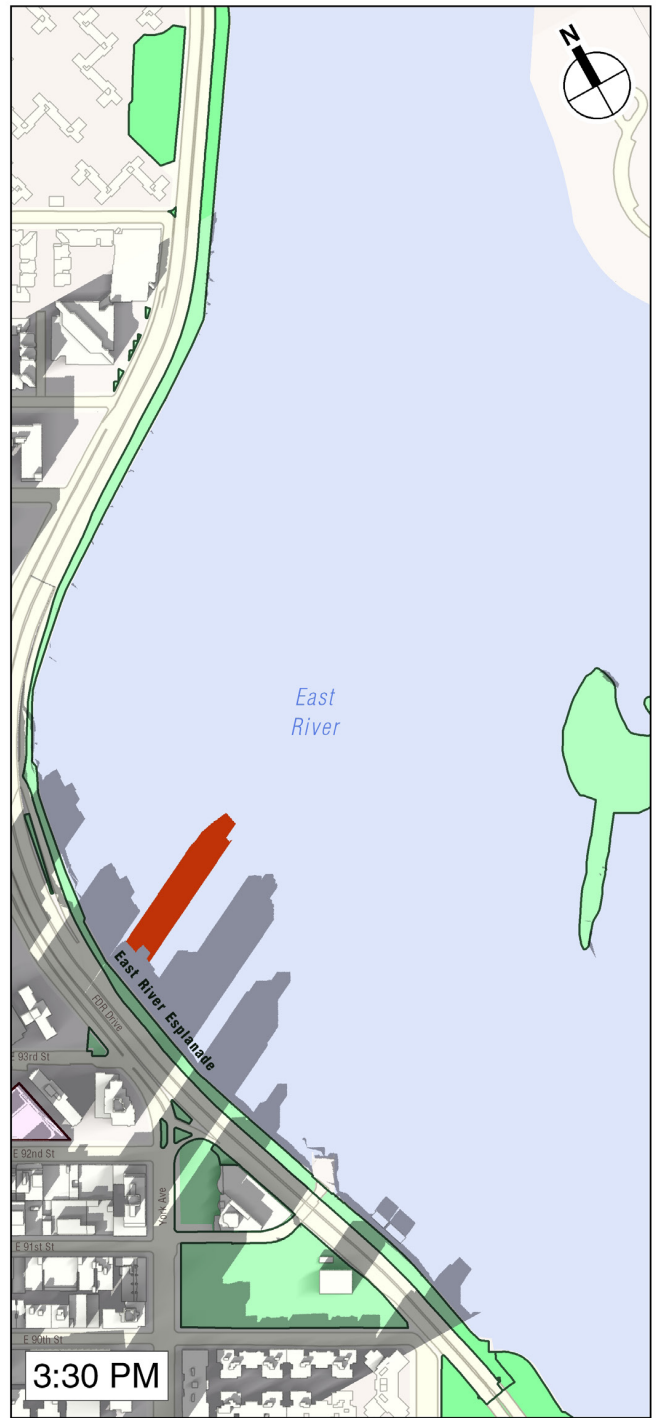
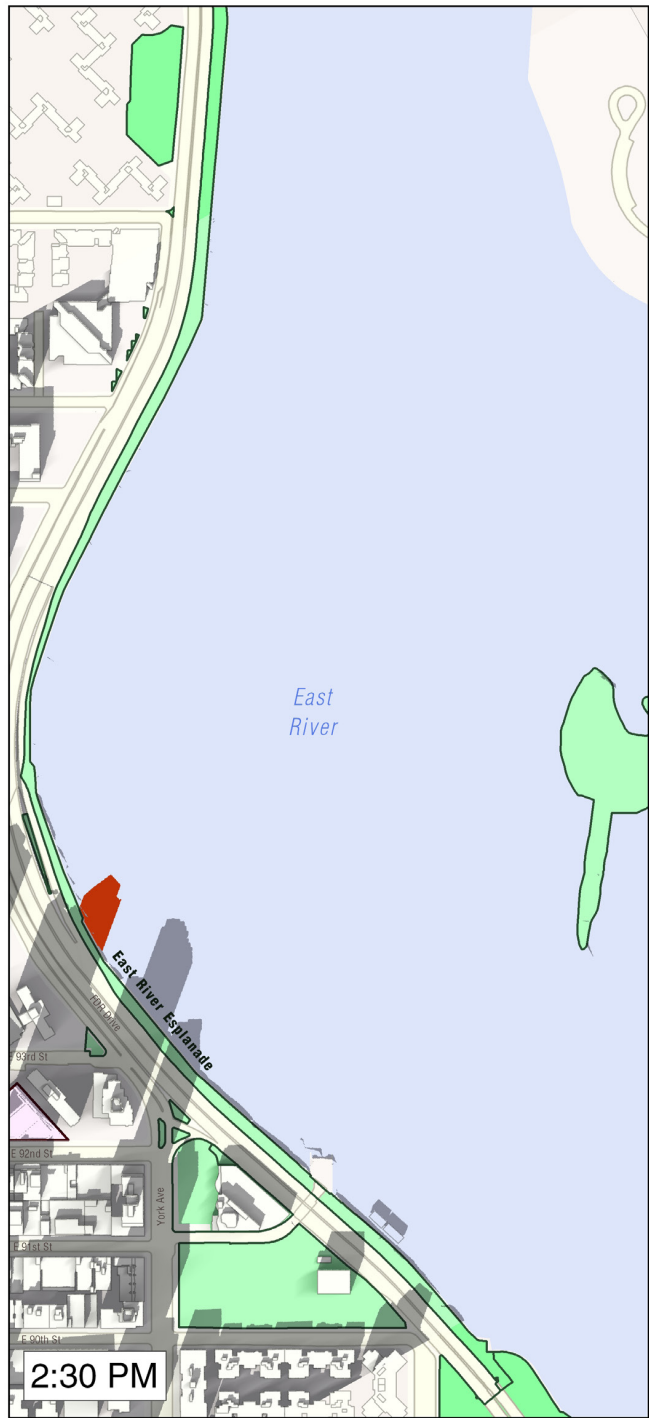


0 200 FEET

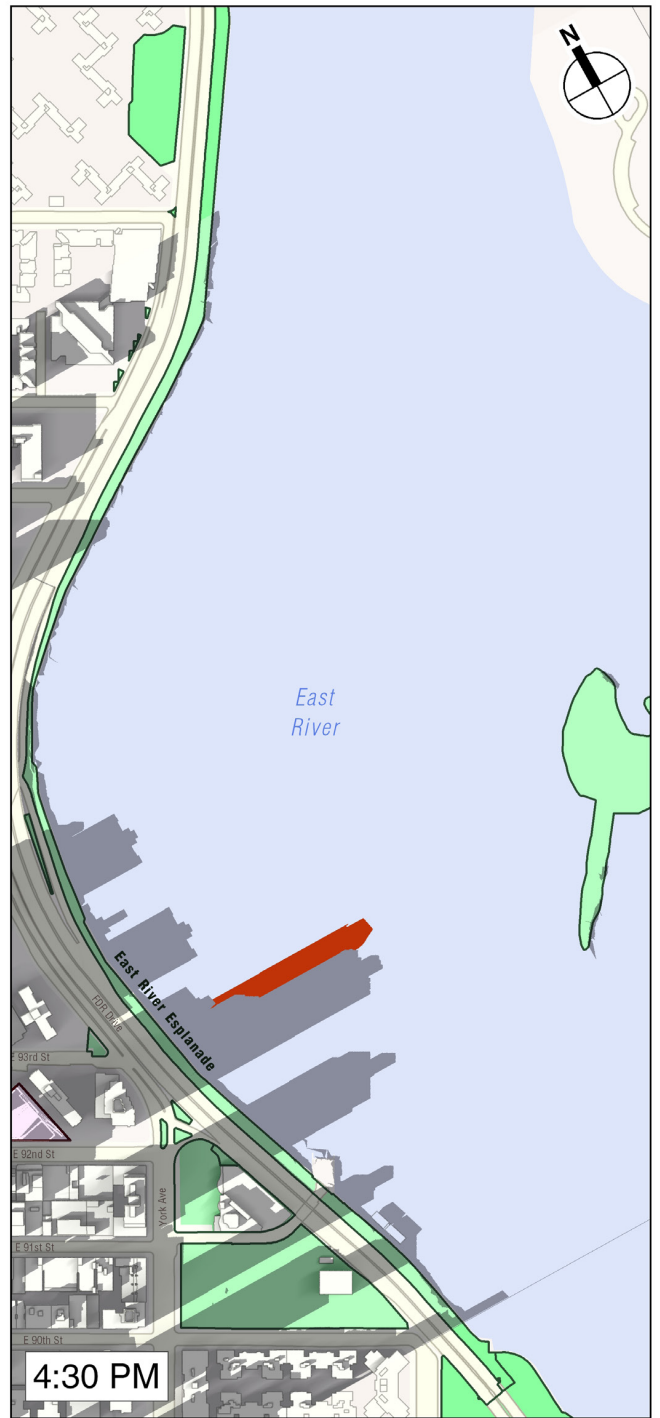
-  Project Site
-  Sunlight-Sensitive Resource
-  Existing and No Action Shadow
-  Incremental Shadow on Resource
-  Direct Sunlight on Resource

BELLWETHER AT YORKVILLE

Detailed Analysis
June 21
Figure F-11

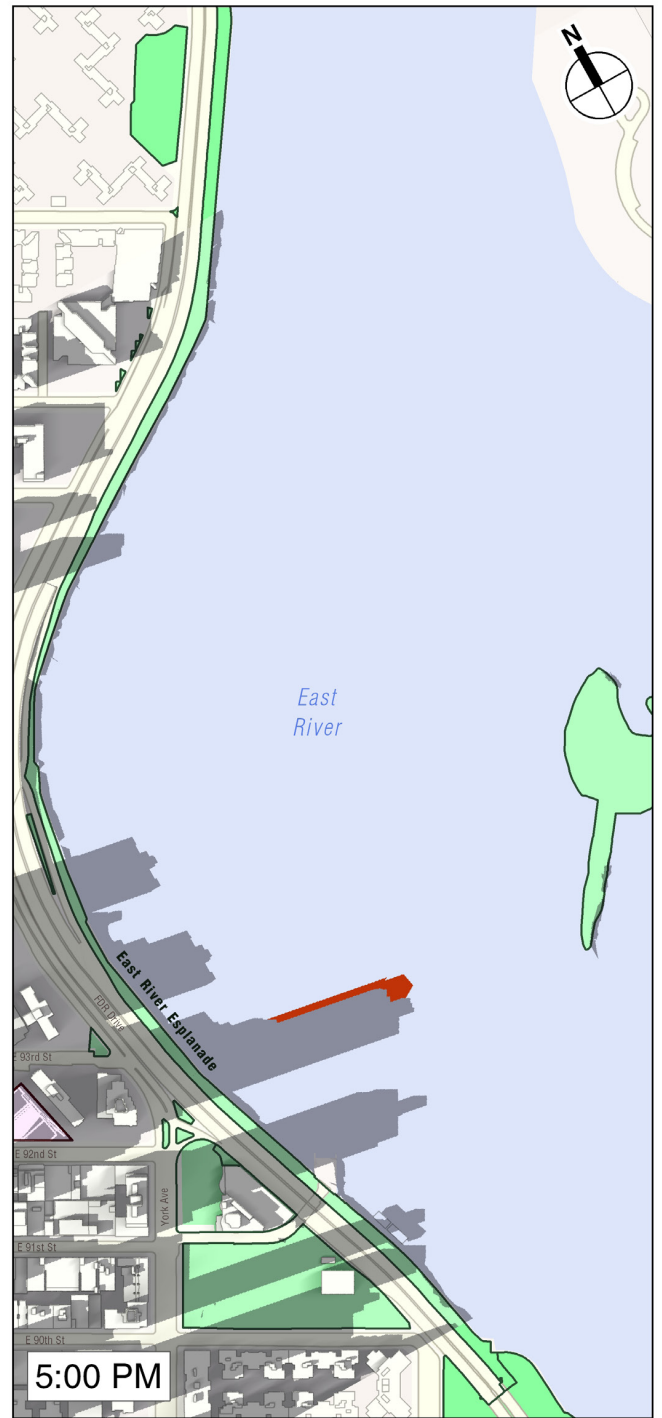


- Project Site
- Sunlight-Sensitive Resource
- Existing and No Action Shadow
- Incremental Shadow on Resource
- Direct Sunlight on Resource



- Project Site
- Sunlight-Sensitive Resource
- Existing and No Action Shadow
- Incremental Shadow on Resource
- Direct Sunlight on Resource

4/12/2018

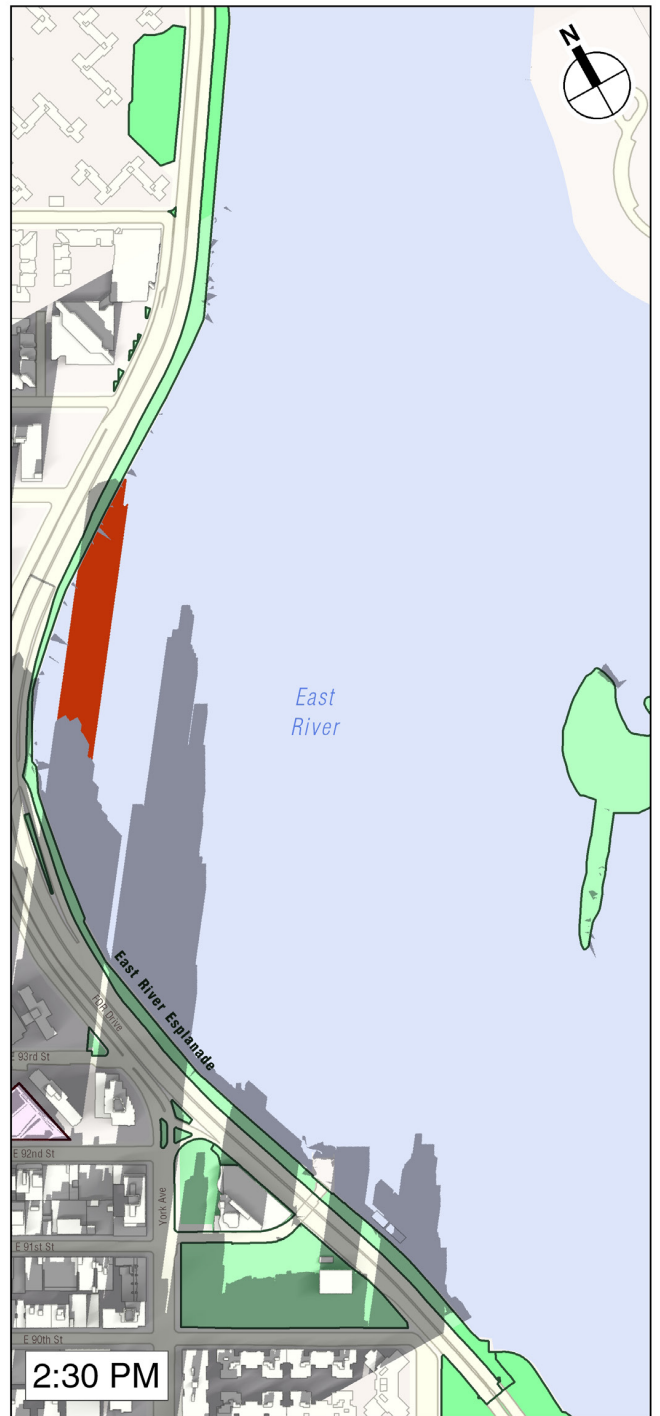
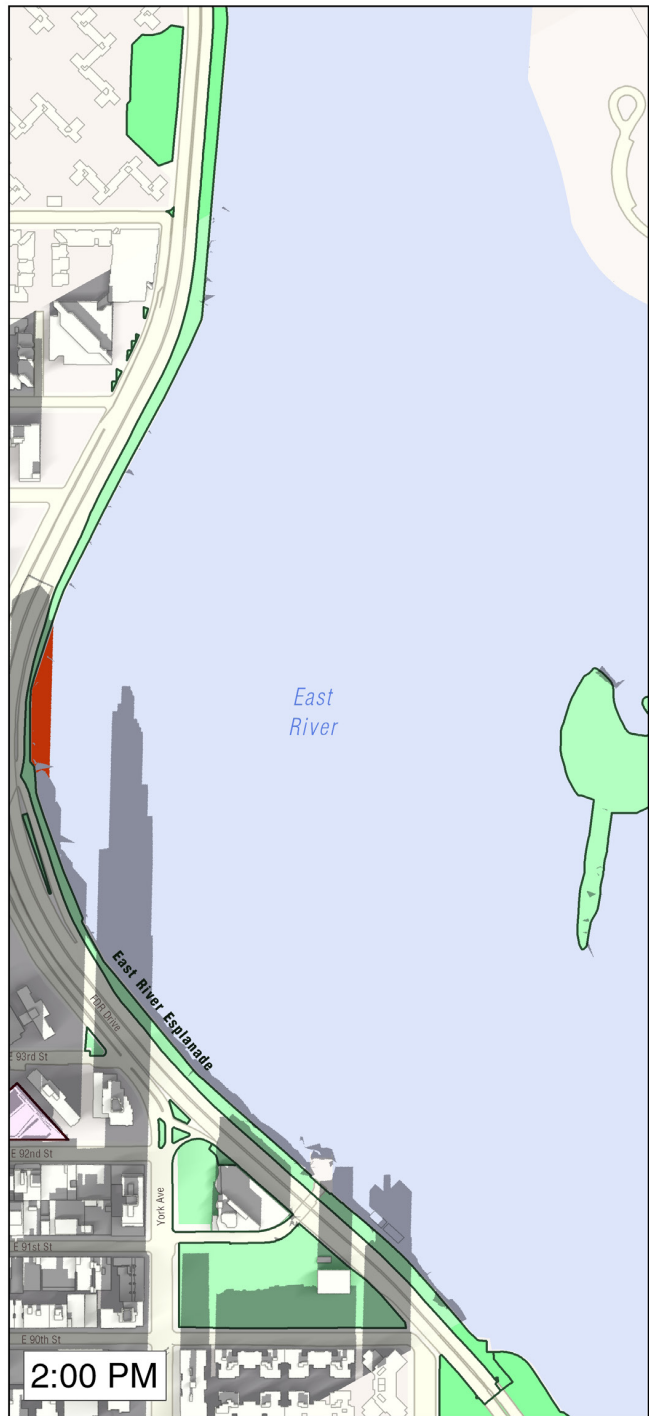


- Project Site
- Sunlight-Sensitive Resource
- Existing and No Action Shadow
- Incremental Shadow on Resource
- Direct Sunlight on Resource






BELLWETHER AT YORKVILLE

Detailed Analysis
June 21
Figure F-14

4/12/2018



0 500 FEET

-  Project Site
-  Sunlight-Sensitive Resource
-  Existing and No Action Shadow
-  Incremental Shadow on Resource
-  Direct Sunlight on Resource

BELLWETHER AT YORKVILLE

Detailed Analysis
December 21
Figure F-15

Determination of Significance

Shadow cast by the proposed project would fall on Normandie Court POPS on only 1 analysis day of the year, December 21. No single area within the resource would be cast in more than 20 minutes of new shadow and given its low usage in winter, Normandie Court POPS' utilization would not be significantly altered. New shadow falling in December would be cast outside the growing season and would not impact the vegetation supported within the resources.

Therefore, incremental shadow resulting from the proposed actions would not substantially reduce the public utilization of Normandie Court POPS or its ability to support vegetation and would not result in a significant adverse shadow impact on this resource.

*Yorkville Plaza POPS (see **Figure F-4**)*

The Yorkville Plaza POPS is located along the north side of East 95th Street between Second and Third Avenues. The sunlight-sensitive open space resource features planted vegetation and seating.

With the proposed actions, the Yorkville Plaza POPS would be cast in incremental shadow on 1 of the 4 analysis days.

*December 21 (see **Figure F-4**)*

From 9:40 AM through 9:50 AM, new shadow would fall on a sliver of the resource near its border with the Normandie Court POPS.

Determination of Significance

Incremental shadow cast by the proposed project would fall on the Yorkville Plaza POPS for 10 minutes on December 21. The limited duration of new shadow would not significantly alter the public utilization of the resource and shadow cast in December would fall outside the growing season and would not threaten the vitality of plant life within the resource. Therefore, the proposed actions would not result in a significant adverse shadow impact on the Yorkville Plaza POPS.

*Charles Fatjo Plaza POPS (see **Figures F-5 through F-7**)*

Charles Fatjo Plaza POPS, is an approximately 0.1-acre POPS located at the intersections of East 92nd and 93rd Streets along First Avenue. Sunlight-sensitive features include benches and landscaping throughout. This open space resource is in good condition and is moderately utilized.

With the proposed actions, Charles Fatjo Plaza POPS would be cast in incremental shadow on 3 of 4 analysis days.

*March 21/September 21 (see **Figure F-5**)*

Beginning at 8:30 AM, shadow cast by the proposed project would enter Charles Fatjo Plaza POPS, falling on nearly all of the benches located in the 92nd Street portion of the resource. After 20 minutes, the proposed project shadow would move off the southern portion of the plaza and then fall on the 93rd Street portion of the resource from 10:05 AM to 10:35 AM.

*May 6/August 6 (see **Figure F-6**)*

Beginning at 8:30 AM, shadow cast by the proposed project would enter Charles Fatjo Plaza POPS from the south and then increase in size until 9:25 AM when it would cover nearly all of the benches located along 92nd Street. The extent of new shadow would then gradually decrease and then, at 9:40 AM, move off the resource.

During this approximately 1-hour, 10 minute period, the constantly moving proposed project shadow would be cast for no more than 15 minutes on any single area within the resource.

*June 21 (see **Figure F-7**)*

Beginning at 9:10 AM, shadow cast by the proposed project would enter Charles Fatjo Plaza POPS from the resource's southeast corner. The new shadow would remain on the same corner of the resource until 9:55 AM, when it moves off the plaza for the remainder of the day.

Determination of Significance

Incremental shadow cast by the proposed project would fall on Charles Fatjo Plaza POPS on March 21/September 21, May 6/August 6, and June 21. However, the new shadow would not significantly alter the public's utilization of the resource or its ability to support plant life.

On March 21/September 21, shadow cast by proposed project would not remain on any one feature of the Plaza for more than 20 minutes and the total duration of direct sunlight on the Plaza's benches and vegetation would not be significantly reduced. On May 6/August 6, the proposed project's shadow would remain on Charles Fatjo Plaza POPS benches and plantings along East 92nd Street for up to 1 hour but all sunlight-sensitive features would continue to be cast in direct sunlight for over 5 hours. The public's utilization of the resource and its ability to support vegetation would not be significantly altered by the new shadow. In June, new shadow would only be cast on a small, unplanted, corner of the resource that does not feature benches.

Therefore, incremental shadow resulting from the proposed actions would not substantially reduce the public utilization of Charles Fatjo Plaza POPS or its ability to support vegetation and would not result in a significant adverse shadow impact on this resource.

*Mill Rock POPS (see **Figures F-5 and F-8**)*

Mill Rock POPS is an approximately 0.2-acre POPS located on the north side of East 93rd Street between First and Second Avenues. Sunlight-sensitive features within the plaza include benches and landscaping, including several trees. This open space resource is in excellent condition and has low utilization.

With the proposed actions, Mill Rock POPS would be cast in incremental shadow on 2 of the 4 analysis days.

*March 21/September 21 (see **Figure F-5**)*

Beginning at 10:00 AM, shadow cast by the proposed project would enter Mill Rock POPS from the west and then increase in size until 10:35 AM when it would cover more than half of the resource. The extent of new shadow would then gradually decrease and then, at 11:10 AM, move off the resource.

*December 21 (see **Figure F-8**)*

Beginning at 9:25 AM, shadow cast by the proposed project would fall on the northwest corner of Mill Rock POPS. The placement of the proposed project's shadow on the resource would remain relatively constant until 9:50 AM, when it would move off the resource completely.

Determination of Significance

Incremental shadow cast by the proposed project would fall on the Mill Rock POPS on the March 21/September 21 and December 21 analysis days. On either day, no single area within the resource would be cast in new shadow for more than 45 minutes and would not experience a significant reduction in direct sunlight.

On March 21/September 21, approximately one-half of the POPS total area would receive less than 4 hours of direct sunlight, less than the minimum quantity needed to support a variety of plant

life according to the *CEQR Technical Manual*. The area that would be cast in new shadow by the proposed project includes several moveable planters supporting trees, shrubs, and plants.

The new shadow would not result in a significant adverse shadow impact to the vegetation. On March 21/September 21 in the No Action condition, none of the affected vegetation would receive more than 45 minutes of additional direct sunlight compared to conditions with the proposed project. From mid-spring through summer, with or without the proposed project, the affected vegetation would receive over 5 hours of direct sunlight. New shadow cast in December would fall outside the growing season. The short duration of new shadow on the vegetation on the March 21/September 21 and December 21 analysis days would not substantially reduce their direct sunlight compared to the No Action condition. Furthermore, the vegetation is all within moveable planters that could be arranged differently within the POPS if certain plant species require additional direct sunlight.

New shadow cast on March 21/September 21 and December 21 would fall on two benches for no more than 30 minutes and would not significantly reduce the resource's utilization. Therefore, incremental shadow resulting from the proposed project would not substantially reduce the public utilization of Mill Rock POPS or its ability to support the same variety of plant life as in the No Action condition and the resource would not experience a significant adverse shadow impact.

*Stanley Isaacs Playground and Greenstreet (see **Figure F-9**)*

Stanley Isaacs Playground is an approximately 1.2-acre City park located to the north and south of East 96th Street between First Avenue and Franklin D. Roosevelt (FDR) Drive. Sunlight-sensitive features within the playground include benches, playground equipment, basketball and handball courts, landscaped areas, and a roller/ice hockey rink. This open space resource is in adequate condition and experiences low utilization. The planted median located along East 96th Street that intersects the park is part of the Greenstreets program.

With the proposed actions, Stanley Isaacs Playground and Greenstreet would be cast in incremental shadow on 1 of 4 analysis days.

*December 21 (see **Figure F-9**)*

Beginning at 12:20 PM, shadow cast by the proposed project would enter Stanley Isaacs Playground from the southwest, falling on a corner of the playground near the intersection of East 95th Street and First Avenue. The extent of new shadow would then gradually increase in size until 1:10 PM, when it would cover the paved courts and landscaping in a majority of the park area located above 96th Street. The new shadow would then continue to move to the east while decreasing in extent and then, at 1:40 PM, completely move off the playground. The Greenstreet located on East 96th street would be partially cast in new shadow from 12:50 PM to 1:20 PM.

During this 80-minute period, the constantly moving project-generated shadow would remain for no more than 35 minutes on any single area within the resource.

Determination of Significance

Incremental shadow cast by the proposed project would fall on the Stanley Isaacs Playground and the adjacent Greenstreet on December 21. The sunlight-sensitive features of the playground that support public utilization would be cast in no more than 35 minutes of new shadow and would all continue to receive direct sunlight throughout nearly half of the analysis day, allowing for their continued utilization. New shadow falling in December would be cast outside the growing season and would not impact the vegetation supported within the resources. Therefore, incremental shadow resulting from the proposed actions would not substantially reduce the usability (which is already

low in the winter months) or threaten the vegetation within Stanley Isaacs Playground and the adjacent Greenstreet and would not result in a significant adverse shadow impact on the resource.

*East 93rd Greenstreet (see **Figures F-10 and F-11**)*

The East 93rd Greenstreet is located within a median at the eastern terminus of 93rd Street at the intersection with FDR Drive. The sunlight-sensitive resource features planted vegetation.

With the proposed actions, the East 93rd Greenstreet would be cast in incremental shadow on 2 of the 4 analysis days.

*May 6/August 6 (see **Figure F-10**)*

Beginning at 1:55 PM, new shadow would enter the resource from the west and then move east across the resource and its vegetation before exiting at 2:20 PM.

*June 21 (see **Figure F-11**)*

On June 21, beginning at 1:45 PM, new shadow would enter the resource at its western edge. The shadow would then move eastwards across the resource and its vegetation, before exiting at 2:45 PM.

Determination of Significance

Incremental shadow cast by the proposed project would fall on the East 93rd Greenstreet on May 6/August 6 and June 21. Within both analysis days, all of the resource's vegetation affected by new shadow would continue to receive over 7 hours of direct sunlight. Therefore, the proposed actions would not result in a significant adverse shadow impact on the East 93rd Street Greenstreet.

*East River (see **Figures F-12 through F-15**)*

The East River is a tidal strait and sunlight-sensitive natural resource that connects the western Long Island Sound with the upper New York Harbor.

With the proposed actions, the East River would experience incremental shadow on all 4 analysis days.

*March 21/September 21 (see **Figure F-12**)*

On March 21, beginning at 2:05 PM, new shadow would enter the resource at approximately East 95th Street. Moving eastward across the river, the shadow would grow in size until the end of the analysis day at 4:29 PM when it would extend nearly 1,000 feet into the River. During this time period, the proposed project's constantly moving shadow would remain for no more than 40 minutes on any single area of the river.

*May 6/August 6 (see **Figure F-13**)*

On May 6, beginning at 2:20 PM, the proposed project's shadow would move onto to the East River and then gradually increase in size until the end of the analysis day at 5:18 PM when it would nearly reach the shore of Mill Rock, an island in the East River. During this approximately 3-hour period, the proposed project's constantly moving shadow would remain for no more than 45 minutes on any single area of the river.

*June 21 (see **Figure F-14**)*

On June 21, beginning at 2:50 PM, the proposed project's shadow would move onto to the East River and then slowly move southeast without growing dramatically in size until the end of the analysis day at 6:01 PM when new shadow would cover an approximately 0.5-acre patch of the East River. During this approximately 3-hour period, the proposed project's constantly moving shadow would remain for no more than 40 minutes on any single area of the East River.

*December 21 (see **Figure F-15**)*

On December 21, beginning at 1:50 PM, the proposed project's shadow would move onto to the East River and then gradually move to the northeast until the end of the analysis day at 2:53 PM when new shadow would cover an approximately 1,800-foot long strip of the East River in the vicinity of East 89th Street. During this approximately 1-hour period, the proposed project's constantly moving shadow would remain for no more than 30 minutes on any single area of the East River.

Determination of Significance

Incremental shadow cast by the proposed actions would fall on the East River throughout the year. Although the geographic extent of new shadow would, at times, be large and would be cast on the East River for as long 3 hours and 11 minutes a day in the summer, the shadow cast by the proposed project would not substantially alter the condition or microclimate of the East River.

Within all seasons, the proposed project's shadow would remain for no more than 45 minutes on any single portion of the river and all affected portions of the East River would continue to receive at least 5 hours of direct sunlight, even on the shortest days of the year. The current flows swiftly in the East River channel (3 to 4 feet/second) and would move phytoplankton and other natural elements that depend on sunlight quickly through the shaded areas. The areas of the East River channel that would receive the longest durations of new shadow would continue to receive ample sunlight in the midday and afternoon. Given the limited duration and extent relative to the river as a whole and the continued availability of un-shaded habitat, incremental shadows generated by the proposed project would not have a significant adverse impact on primary productivity (the rate at which solar energy and simple chemicals are converted to organic biomass through photosynthesis or chemosynthesis) or fish within the East River. Therefore, incremental shadow resulting from the proposed actions would not result in a significant adverse shadow impact on the East River.

*East River Esplanade (see **Figures F-12 through F-15**)*

The East River Esplanade runs along the shoreline of the East River in Manhattan between East 90th and East 125th Streets. Sunlight-sensitive features within the portion of the resource affected by new shadow include benches, landscaping, and small trees. This resource is in adequate condition and has moderate usage.

With the proposed actions, the East River Esplanade would be cast in incremental shadow on all 4 analysis days.

*March 21/September 21 (see **Figure F-12**)*

Beginning at 2:00 PM, new shadow would enter the esplanade in the vicinity of East 94th Street and then increase in size until 2:15 PM, when it would cover the benches and landscaping in an approximately 3,000 square foot (sf) area of the resource located just east of the Stanley M. Isaacs Houses. The shadow would then move northeast across the esplanade before exiting the resource at 3:05 PM.

*May 6/August 6 (see **Figure F-13**)*

Beginning at 2:10 PM, new shadow would enter the esplanade in the vicinity of East 94th Street and then increase in size until 2:40 PM, when it would cover the benches and landscaping in an approximately 2,500 sf area of the resource. The shadow would then move northeast across the esplanade before exiting the resource at 3:45 PM.

*June 21 (see **Figure F-14**)*

Beginning at 2:40 PM, new shadow would enter the esplanade in the vicinity of East 93rd Street and then increase in size until 2:55 PM, when it would cover the benches and landscaping in an

approximately 2,250 sf area of the resource. The shadow would then move slightly southeast across the esplanade before exiting the resource at 4:00 PM.

December 21 (see Figure F-15)

Beginning at 1:45 PM, new shadow would enter the esplanade in vicinity of East 95th Street and then increase in size until 2:10 PM, when it would cover the resource's benches located between East 96th and East 98th Streets. The extent of proposed project shadow on the esplanade would then gradually decrease until the end of the analysis day at 2:53 PM.

Determination of Significance

Incremental shadow cast by the proposed project would fall on the East River Esplanade on all 4 analysis days with different portions of the East River Esplanade cast in new shadow depending on the season. However, the new shadow would not significantly alter the public utilization of the resource or its ability to support plant life.

No matter the season, all benches and seating areas affected by new shadow would be in direct sunlight for over 5 hours in the mornings and early afternoons. In the spring and summer the duration of direct sunlight falling on the resource's affected features would last up to 9 hours and their utilization would not be significantly altered by the proposed project. All vegetation affected by new shadow within the resource would continue to receive over 7 hours of direct sunlight per day from mid-spring through summer and over 6 daily hours in the early spring and fall, which is a sufficient duration to support a variety of plant life according to the *CEQR Technical Manual*. Shadow cast on December 21 would fall outside the growing season.

Therefore, incremental shadow resulting from the proposed actions would not substantially alter the public utilization of the East River Esplanade or its ability to support vegetation and would not result in a significant adverse shadow impact on this resource. *

A. INTRODUCTION

This attachment assesses the potential for the proposed project to affect historic and cultural resources. The proposed actions would facilitate the development of a mixed-use residential and community facility building (the “proposed project”) at a site on the northern side of East 92nd Street between First and York Avenues (a portion of Block 1573, Lot 20; the “project site”) in the Yorkville neighborhood of Manhattan, Community District 8.

Historic and cultural resources include both archaeological and architectural resources. The study area for archaeological resources includes any areas where in-ground disturbance would occur as a result of the construction of the proposed project, or the project site itself. In a comment letter dated December 21, 2017, the New York City Landmarks Preservation Commission (LPC) determined that the project site is not archaeologically significant (see **Appendix A**). Therefore, the proposed project would not result in significant adverse impacts on archaeological resources and this analysis focuses on standing structures only.

B. METHODOLOGY

Under 2014 *City Environmental Quality Review (CEQR) Technical Manual* methodology, known architectural resources are defined as buildings, structures, objects, sites, and districts that are National Historic Landmarks (NHLs), have been listed on or determined eligible for listing on the State and/or National Registers of Historic Places (S/NR), are New York City Landmarks (NYCLs) and/or are New York City Historic Districts (NYCHDs), and properties that have been found by LPC to appear eligible for designation, considered for designation (“heard”) by LPC at a public hearing, or calendared for consideration at such a hearing for NYCL designation (these are “pending” NYCLs).

The study area for architectural resources is determined based on a proposed action’s potential to affect architectural resources, including both direct physical impacts and indirect, contextual impacts. Direct impacts include demolition of a resource and alterations to a resource that cause it to become a different visual entity. A resource could also be damaged by adjacent construction activities such as blasting, pile driving, falling objects, subsidence, collapse, or damage from construction machinery unless proper protection measures are put in place. Adjacent construction is defined as any construction activity that would occur within 90 feet of an historic resource, as noted in the New York City Department of Building (DOB) *Technical Policy and Procedure Notice (TPPN) #10/88*.¹

Indirect impacts are contextual or visual impacts that could result from project development. As described in the *CEQR Technical Manual*, indirect impacts can result from a change in scale,

¹ *TPPN #10/88* was issued by DOB on June 6, 1988, to supplement Building Code regulations with regard to historic structures. *TPPN #10/88* outlines procedures for the avoidance of damage to historic structures resulting from adjacent construction, defined as construction within a lateral distance of 90 feet from the historic resource.

visual prominence, or visual context of any building, structure, object, or landscape feature; screening or elimination of publicly accessible views; or introduction of significant new shadows or significant lengthening of the duration of existing shadows on an historic landscape or on an historic structure if the features that make the resource significant depend on sunlight. Significant adverse direct or indirect impacts can occur if a project would cause a change in the quality of a property that qualifies it for S/NR listing or for designation as a NYCL.

Following the guidelines of the *CEQR Technical Manual*, to account for potential direct and indirect impacts, the architectural resources study area for the proposed project has been defined as the area within 400 feet of the project site (see **Figure G-1**). Within this area, all known architectural resources have been identified, mapped, and are described below. In addition, a survey of the study area was undertaken to identify any buildings that could meet S/NR and NYCL eligibility criteria (“potential architectural resources”); however, no such potential architectural resources were identified in the study area.

C. EXISTING CONDITIONS

PROJECT SITE

The project site is a portion of the New York City Housing Authority (NYCHA) John Haynes Holmes Towers development (the “Holmes Towers development”). The project site currently contains two play areas, landscaping, and walkways serving the Holmes Towers development. The New York State Office of Parks Recreation and Historic Preservation (OPRHP) has previously determined that the Holmes Towers development does not meet S/NR eligibility criteria.² Therefore, there are no architectural resources on the project site.

STUDY AREA

There are two known architectural resources in the study area.

Five five-story tenement structures are located at 1756-1764 First Avenue (S/NR-eligible). Built between 1902 and 1905, all five buildings are faced in brick and designed in a Renaissance Revival style (see **Figure G-2**, photo 1). Although consisting of two distinctive stylistic groupings—1756-1758 First Avenue and 1760-1764 First Avenue—they create a cohesive ensemble and are good examples of early 20th century residential buildings. The three northernmost buildings are more elaborate in ornamentation. Decorative Renaissance-style features include terra-cotta pilaster capitals, carved terra-cotta panels and swags, brick and terra-cotta windows arches, scrolled keystones, and corbelling. The stepped sheet metal cornices on these three buildings have panels with foliate reliefs and decorative brackets and modillions. Although similar in style, the two buildings at 1756 and 1758 First Avenue have less applied ornamentation. They have arched window bays with decorative brick arches, brick panels, dogtooth brick courses, stone banding, and sheet metal cornices with modillions and unornamented panels. The ground floors of all five buildings have been altered with modern storefronts, and a sixth building at 1766 First Avenue has been demolished and replaced with a modern building. The northernmost tenement building is in closest proximity to the project site, and is located approximately 165 feet southwest of the project site.


Franklin D. Roosevelt (FDR) Drive (S/NR-eligible) is 9.44 miles long, beginning at the end of the Battery Park underpass and running north along the East River to the 125th Street/Triborough

² <https://cris.parks.ny.gov>

1/2/2018




 Project Site

 Study Area (400-foot perimeter)



Photograph View Direction and Reference No

 1756-1764 First Avenue (S/NR-eligible)

 FDR Drive (S/NR-eligible)

0 200 FEET



1756-1764 First Avenue 1



FDR Drive Facing North 2

Bridge exit. Originally known as the East River Drive, FDR Drive meets National Register Criterion A in the fields of transportation and community/regional planning as an important link in New York City's transportation infrastructure. Construction began on FDR Drive in 1934 under the direction of Robert Moses and was largely completed by 1967. Though segments of the structure have undergone alterations through the years, this linear resource has been determined to retain sufficient integrity overall to convey its historic significance (see **Figure G-2**, Photo 2). FDR Drive is located approximately 350 feet east of the project site.

D. FUTURE WITHOUT THE PROPOSED PROJECT

PROJECT SITE

In the future without the proposed project (the "No Action" condition), the project site is expected to remain in its existing condition and no new development on the project site would occur.

STUDY AREA

There is one development project that will be completed in the study area by the 2021 build year. This development would not affect the architectural resources in the study area.

E. FUTURE WITH THE PROPOSED PROJECT

PROJECT SITE

The proposed actions would redevelop the project site with a new mixed-use residential and community facility building. The proposed building would be 50 stories with an overall maximum height of approximately 530 feet to the top of the bulkhead screen. The proposed project would include a playing field on the first floor rooftop of the northern portion of the building and a roof terrace for residents on the fourth floor on the south side of the building.

As there are no architectural resources on the project site, the proposed project would not have any significant adverse impacts on such resources.

STUDY AREA

The proposed project would have no adverse impacts on architectural resources in the study area. Since the architectural resources are located more than 90 feet from the project site, the resources are located beyond the range at which physical impacts would be anticipated.

The proposed project's potential to result in indirect, or contextual impacts, was also evaluated. Indirect impacts could result from blocking significant public views of a resource; isolating a resource from its setting or relationship to the streetscape; altering the setting of a resource; introducing incompatible visual, audible, or atmospheric elements to a resource's setting; or introducing shadows over a historic landscape or an architectural resource with sun-sensitive features that contribute to that resource's significance, such as a church with notable stained glass windows.

It is not anticipated that the proposed project would result in any of these types of adverse visual or contextual impacts on architectural resources. The proposed project would not block significant public views of the architectural resources in the study area, nor would it isolate them from the setting or their relationship to the streetscape. The tenements at 1756-1764 First Avenue face west toward the avenue and buildings on the south side of East 92nd Street intervene between the

Bellwether at Yorkville

project site and these resources. FDR Drive is located at the east end of the study area, with buildings of the Holmes Towers development between this resource and the project site. Therefore, the existing setting of these resources would not be substantially altered nor would the proposed project obstruct public views to these resources. While the proposed project would replace the current landscaped areas and play area, the proposed building would be compatible with the existing residential character of the study area and new play areas would be constructed to replace the existing play areas in the project site.

Overall, the proposed project would not result in significant adverse impacts to historic and cultural resources *

A. INTRODUCTION

This attachment considers the potential for the proposed project to affect urban design and visual resources. The proposed actions would facilitate the development of an approximately 358,000-gross square foot (gsf), 50-story tall mixed-use residential and community facility building (the “proposed project”) at a site on the northern side of East 92nd Street between First and York Avenues (a portion of Block 1573, Lot 20; the “project site”) in the Yorkville neighborhood of Manhattan, Community District 8.

Under the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, urban design is defined as the totality of components that may affect a pedestrian’s experience of public space. These components include streets, buildings, visual resources, open spaces, natural features, and wind. An urban design assessment under CEQR must consider whether and how a project may change the experience of a pedestrian in a project area. The *CEQR Technical Manual* guidelines recommend the preparation of a preliminary assessment of urban design and visual resources, followed by a detailed analysis, if warranted based on the conclusions of the preliminary assessment. The analysis provided below addresses urban design characteristics and visual resources for existing conditions and the future without the proposed project (the “No Action” condition) and the future with the proposed project (the “With Action” condition).

As described in detail below, the proposed project would not be anticipated to result in significant adverse impacts to urban design and visual resources.

B. METHODOLOGY

Based on the *CEQR Technical Manual*, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Examples include projects that permit the modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed “as-of-right” or in No Action condition. As described in detail in Attachment A, “Project Description and Screening Analyses,” the proposed project would require mayoral zoning overrides of certain sections of the New York City Zoning Resolution related to height and setback, minimum distance between buildings, and open space ratio. Therefore, as the proposed project would result in physical alterations beyond those allowed by existing zoning, which could be observed by pedestrians, it would meet the threshold for a preliminary assessment of urban design and visual resources.

According to the *CEQR Technical Manual*, the study area for urban design is the area where the project may influence land use patterns and the built environment, and is generally consistent with that used for the land use analysis. For visual resources, the view corridors within the study area from which such resources are publicly viewable should be identified. Consistent with CEQR methodologies, the study area for the urban design and visual resources analysis has been defined

as a 400-foot radius around the project area, consistent with the analysis of land use, zoning, and public policy (see **Figures H-1 and H-2**).

The *CEQR Technical Manual* guidelines state that if the preliminary assessment shows that changes to the pedestrian environment are sufficiently significant to require greater explanation and further study, then a detailed analysis is appropriate. Examples include projects that would potentially obstruct view corridors, compete with icons in the skyline, or make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings. Detailed analyses also are generally appropriate for area-wide rezonings that include an increase in permitted floor area or changes in height and setback requirements, general large-scale developments, or projects that would result in substantial changes to the built environment of a historic district or components of a historic building that contribute to the resource's historic significance. The proposed project would result in the replacement of the play areas and landscaping currently on the project site with a 50-story building, and thus could make substantial alterations to the streetscape of the neighborhood by noticeably changing the scale of buildings. Therefore, a detailed analysis for urban design is appropriate.

The *CEQR Technical Manual* recommends an analysis of pedestrian wind conditions for projects that result in the construction of large buildings at locations that experience high wind conditions (such as along the waterfront, or other locations where winds from the waterfront are not attenuated by buildings or natural features), which may result in an exacerbation of wind conditions due to “channelization” or “downwash” effects that may affect pedestrian safety. The proposed project would not result in the construction of large building at a location that experiences high wind conditions, and thus a pedestrian wind analysis is not warranted.

C. EXISTING CONDITIONS

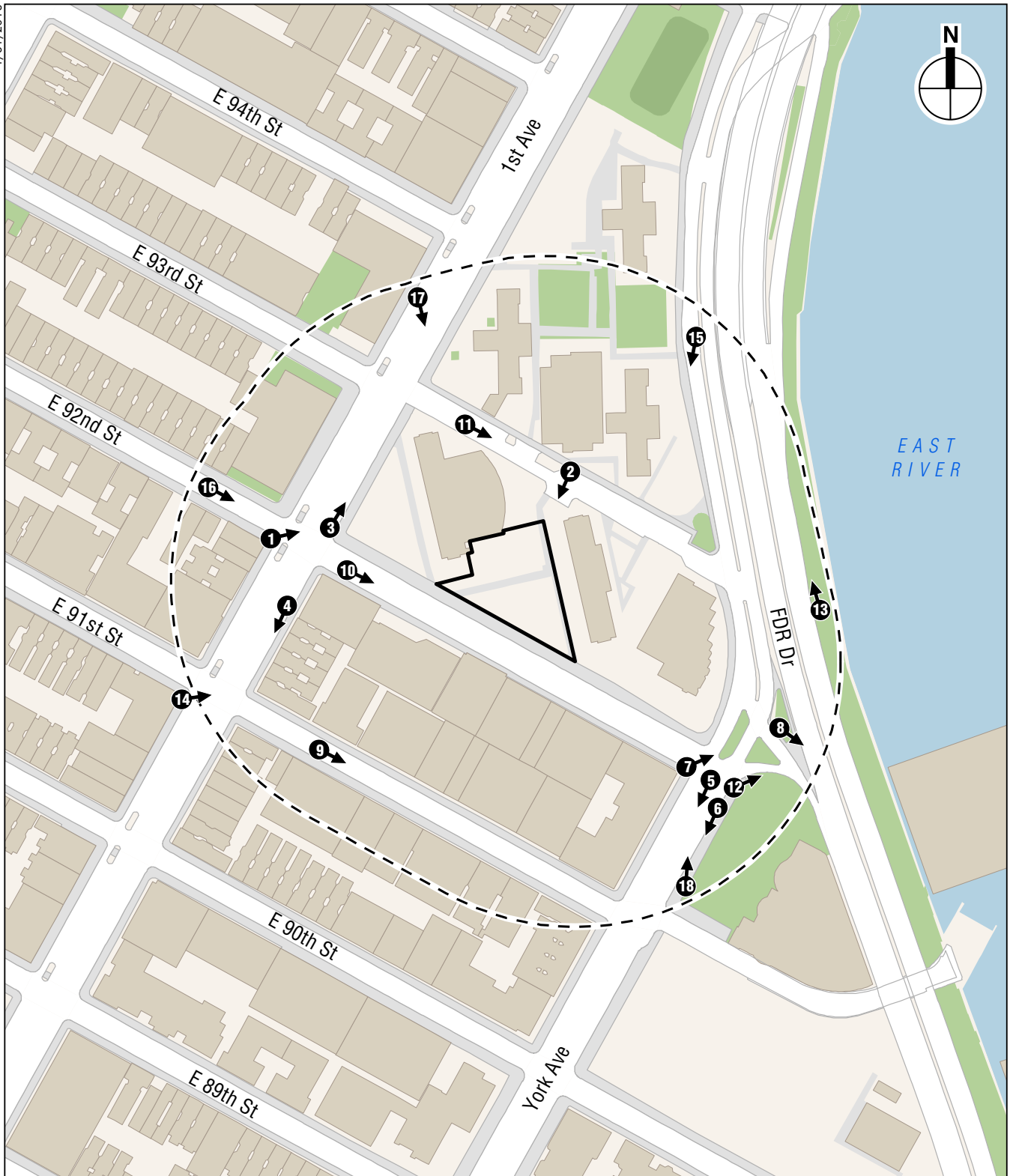
URBAN DESIGN

PROJECT SITE


The project site is located on the northern side of East 92nd Street between First and York Avenues (a portion of Block 1573, Lot 20), in the Yorkville neighborhood of Manhattan. It is a roughly triangular area that is approximately 20,738 sf in size and contains a landscaping, walkways, and two play areas serving the adjacent John Haynes Holmes Towers (the “Holmes Towers development”), a New York City Housing Authority (NYCHA) development (see photographs 1–9 in the Environmental Assessment Statement [EAS] and **Figure H-3**). The play areas are surrounded by low metal fences and include benches and play equipment. The landscaped area comprises a grassy area with trees.

STUDY AREA

The remainder of the project block is occupied by the Holmes Towers development—which comprises two 25-story towers flanking the project site, with a smaller play area and a one-story community center close to First Avenue—and the Brittany Towers, a 36-story (371-foot-tall), red brick-faced residential tower at the corner of York Avenue. Both developments are surrounded by low metal fences and set back from the street behind landscaped areas. There is one curb cut along the East 92nd Street portion of the project block, for access to the parking garage for the Brittany Towers.



 Project Site

 Study Area (400-foot boundary)

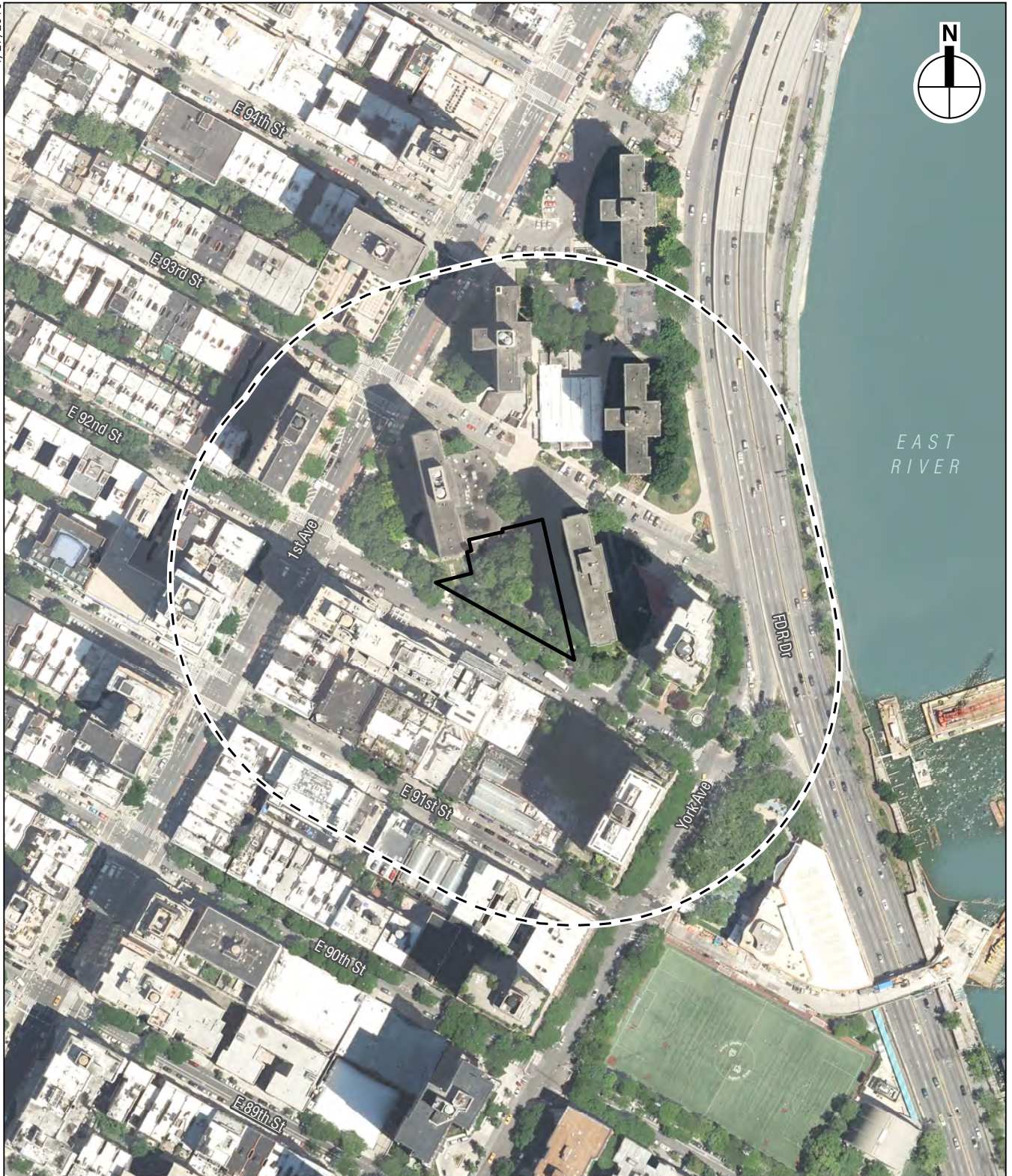


Photograph View Direction and Reference Number

BELLWETHER AT YORKVILLE

Urban Design and Visual Resources
Photograph Key
Figure H-1

1/29/2018



EAST
RIVER

FDR Dr

York Ave

E 94th St

E 93rd St

E 92nd St


1st Ave


E 91st St

E 90th St

E 89th St

 Project Site

 Study Area (400-foot boundary)

0 200 FEET


BELLWETHER AT YORKVILLE

Aerial Map
Figure H-2



John Haynes Holmes Towers - View from southwest corner of
First Avenue and East 92nd Street

1



John Haynes Holmes Towers -
View facing south from East 93rd Street

2

The study area is urban in character, with streets flanked by concrete sidewalks. The majority of the study area is laid out in a typical street grid, with wide north-south avenues and narrower east-west cross streets. The rectangular blocks formed by the street grid are oriented with their shorter sides facing the avenues and their long sides facing the cross streets. North of East 93rd Street, there is a superblock bounded by First Avenue, Franklin D. Roosevelt (FDR) Drive, and East 93rd and 96th Streets; this is occupied by the Stanley M. Isaacs Houses NYCHA development, described below. Furthermore, the street separating the Holmes Towers and Stanley M. Isaacs developments (the continuation of East 93rd Street) between First and York Avenues only serves to provide access to private parking spaces at each end of the block, and is separated by a paved pedestrian accessway at the center of the block. FDR Drive—a large arterial roadway that carries two-way traffic along the eastern edge of Manhattan—runs parallel to the East River waterfront through the eastern portion of the study area, creating irregularly shaped blocks (see **Figure H-6**).

Street furniture within the study area includes cobra-head street lamps, traffic lights, bus stop signs, fire hydrants, trash cans, bike racks, and modern, bent-steel decorative tree surrounds along the sidewalks. There is a dedicated bus lane on the east side of First Avenue, a dedicated bike line on the west side of the avenue (separated from vehicular traffic by parked cars), and a Citi Bike station on the west side of the avenue between East 93rd and 94th Streets. There is also a conventional bike lane on East 91st Street. There is transportation signage on gantries above the FDR Drive, as well as on First Avenue for the dedicated bus lane. Multiple bus routes serve the study area, along First and York Avenues and East 90th and 91st Streets. The topography of the area has a gradual decline from south to north.

The buildings in the study area are a mix of generally low-scale structures, including five- and six-story tenement buildings, and residential tower developments between 24 and 37 stories in height. With the exception of the NYCHA developments described below, the buildings in the study area are generally built to the lot line and fully occupy their lots.

First Avenue, at the western edge of the study area, is a 100-foot-wide street that carries two-way traffic north and south. First Avenue is lined with mixed-use buildings that range in height between five stories (57 feet) and 32 stories (310 feet) tall and have ground-floor commercial space. Between East 91st and 92nd Streets are five- and six-story tenement buildings on both sides of the street; these buildings each share the block front with a 32-story residential tower. Between East 92nd and East 94th Streets, the east side of First Avenue is occupied by two NYCHA housing complexes—the Holmes Towers development and the Stanley M. Isaacs Houses—while the west side of the avenue is occupied by 30- and 32-story (up to 310-foot-tall) residential towers. The Holmes Towers and Stanley M. Isaacs developments collectively include six buildings up to 25 stories (217 feet) in height. They are rectilinear in their massing, clad in red brick, and are set back from and at an angle to the surrounding streets. Building materials vary along First Avenue; the five-story buildings are constructed in brick, with metal cornices and iron fire escapes, while the residential towers are a mix of brick, glass, and metal (see **Figure H-4**). York Avenue is a 100-foot-wide street that carries two-way traffic and, together with the FDR Drive, forms the eastern border of the study area. York Avenue's terminus is at East 92nd Street, where it merges with FDR Drive. On the east side of York Avenue are Asphalt Green and DeKovats Playground, discussed below. These open space resources occupy the entire block front between East 91st and 92nd Streets. The west side of York Avenue between East 91st and 92nd Streets is occupied by the Barclay, a 37-story (353-foot-tall) residential tower, as well as the NYCHA complexes described above (see **Figure H-5**).



First Avenue facing north from East 92nd Street

3



First Avenue sidewalk view facing south East 92nd Street

4



York Avenue facing south toward East 92nd Street

5



York Avenue Sidewalk view facing south toward East 91st Street

6



View from York Avenue and East 92nd Street facing northeast toward
FDR Drive and East River

7



FDR Drive facing south from East 92nd Street

8

East 91st and 92nd Streets are 60-foot-wide streets that carry one-way traffic. There is parking on both sides of these streets. Within the study area, East 91st Street contains primarily commercial uses, including moving and storage facilities and parking garages housed in older one- to six-story brick buildings. The buildings on East 92nd Street within the study area range in height from one- to 25-stories. On the south side of this street, opposite the project block, building materials vary, from brick for the shorter buildings, to glass and metal for the taller buildings, including a 15-story hotel (see **Figure H-7** and **Figure H-8**, view 11).

The open space resources in the study area are the East River Esplanade, Asphalt Green, and DeKovats Playground. Asphalt Green is a private recreation center that is a pay to use facility. DeKovats Playground belongs to the New York City Department of Parks and Recreation (NYC Parks) and is a public open space (see **Figure H-8**, view 12). The East River Waterfront Esplanade (also known as the Bobby Wagner Walk) is located between the FDR Drive and the East River. It is a paved path used for running, walking, and bicycling. The area is landscaped with grass, trees, street lamps, and benches (see **Figure H-9**). At present, the entrances to the esplanade within the study area are inaccessible due to construction; the closest access point is currently north of the study area, at East 96th Street. There are also two privately owned, publicly accessible plazas in the study area; one on the west side of First Avenue between East 92nd and 93rd Streets (the Charles Fatio Plaza) and one on the north side of East 93rd Street between First and Second Avenues (Mill Rock Plaza). These areas have benches and plantings. The study area's notable natural feature is the East River, and there are views to the river from York Avenue and FDR Drive. There are street trees throughout the study area, primarily on First and York Avenues.

VISUAL RESOURCES

As defined in the *CEQR Technical Manual*, a visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

PROJECT SITE

The landscaped area and play areas on the project site are not identified as visual resources.

STUDY AREA

Views within the study area are longest along First Avenue facing both north and south, and York Avenue facing south. Views along the avenues generally extend for long distances, but without any notable focus or visual resources within those views; views north on York Avenue are an exception, as they include the East River beyond the FDR Drive. Both avenues are lined with tall buildings that are similar to the residential towers in the study area. Views west along the side streets are long; views east along these streets are generally short, as the streets terminate at York Avenue. From East 93rd Street near York Avenue, views east include the East River beyond the FDR Drive.

Views from the East River Esplanade within the study area include the river, the Robert F. Kennedy (Triborough) Bridge, and the Wards Island Bridge. Views of the project site from the esplanade are limited by the residential towers along York Avenue. Views inland from the esplanade include the historic parabolic arch of Asphalt Green (the former municipal asphalt plant) and a pedestrian bridge crossing the FDR Drive. As noted above, entrances to the esplanade within the study area are currently inaccessible due to construction, but the esplanade itself is still open.



East 91st Street facing east from First Avenue

9



East 92nd Street facing northeast from First Avenue

10

East 93rd Street facing east - View is midblock within
NYCHA complex

11



DeKovats Playground

12



Bobby Wagner Walk facing north 13

The historic resources in the surrounding area, including the tenement buildings on First Avenue, are visually interesting, but are not highly visible except along adjacent streets. From within the study area, views to the project site are mostly limited to First Avenue and East 92nd Street, as well as the mid-block pedestrian accessway linking the Holmes Towers and Stanley M. Isaacs Houses developments (see **Figures H-10**).

D. FUTURE WITHOUT THE PROPOSED PROJECT

PROJECT SITE

In the No Action condition, the project site is expected to remain in its existing condition and no new development on the project site would occur.

STUDY AREA

As discussed in Attachment B, “Land Use, Zoning, and Public Policy,” in the No Action condition, current conditions within the study area are expected to continue. One development project is anticipated to be completed by the 2021 analysis year within the 400-foot study area. This project would be a six-story storage structure. It would be similar in height to the five- and six-story tenement buildings that currently exist in the study area on First Avenue, and thus would not affect the urban design or visual resources within the study area. In addition, it is anticipated that the construction within the East River Esplanade would be completed by 2021, and thus the entrances within the study area would be reopened.

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

URBAN DESIGN

PROJECT SITE

In the With Action condition, the project site would be redeveloped with a new approximately 358,000-gsf, 50-story (530-foot-tall to the top of the bulkhead screen) mixed-use residential and community facility building. The proposed project would include two setbacks, one for a new rooftop playing field on the north side of the building, and the other to provide a terrace for residents on the south side of the building. The proposed building would be built to the lot line along East 92nd Street and would rise four stories (approximately 55 feet) along East 92nd Street before setting back. A rooftop terrace for building residents would be provided above the fourth floor along the east façade. The building would be set at an angle within the lot, mirroring the orientation of the adjacent Holmes Towers development (see **Figures H-11 through H-16**). The proposed building would have a slightly wider footprint than the adjacent Holmes Towers development.

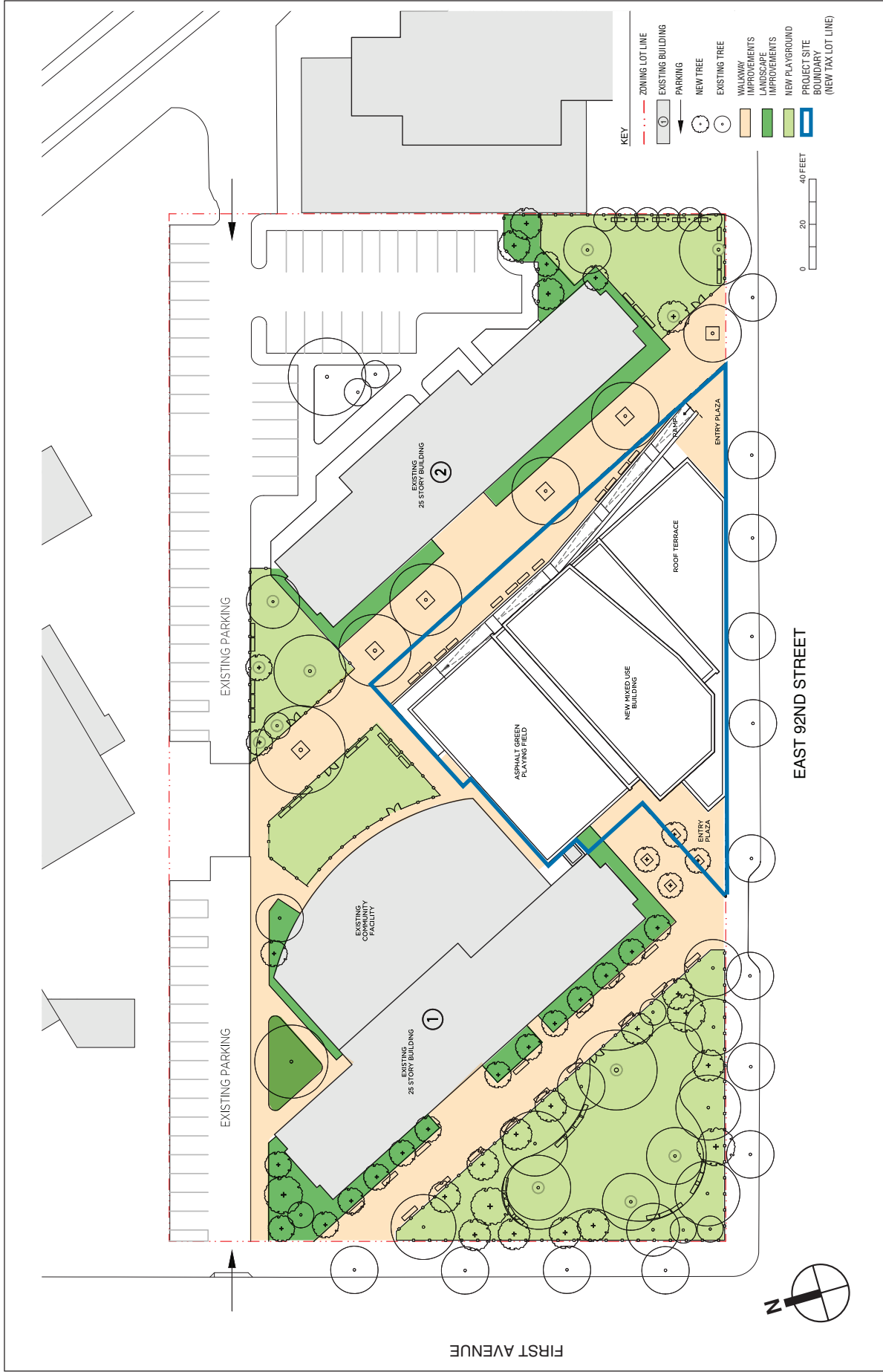
The first four floors of the proposed building would be clad in stone and metal panels, as well as materials that are yet to be determined (see **Figures H-12 and H-13**). The remainder of the building would be clad in metal panels with different shades of copper and gray window frames. Entrances to the building would be located on East 92nd Street; the residential entrance would be on the west side of the development, and the community facility entrance would be on the east side of the development. The proposed project would replace the current play areas on the project site within the Holmes Towers development, and residents would continue to have access to the playground within the Stanley M. Isaacs Houses development.



1754-1764 1st Avenue - View from southwest corner of
First Avenue and East 91st Street **14**

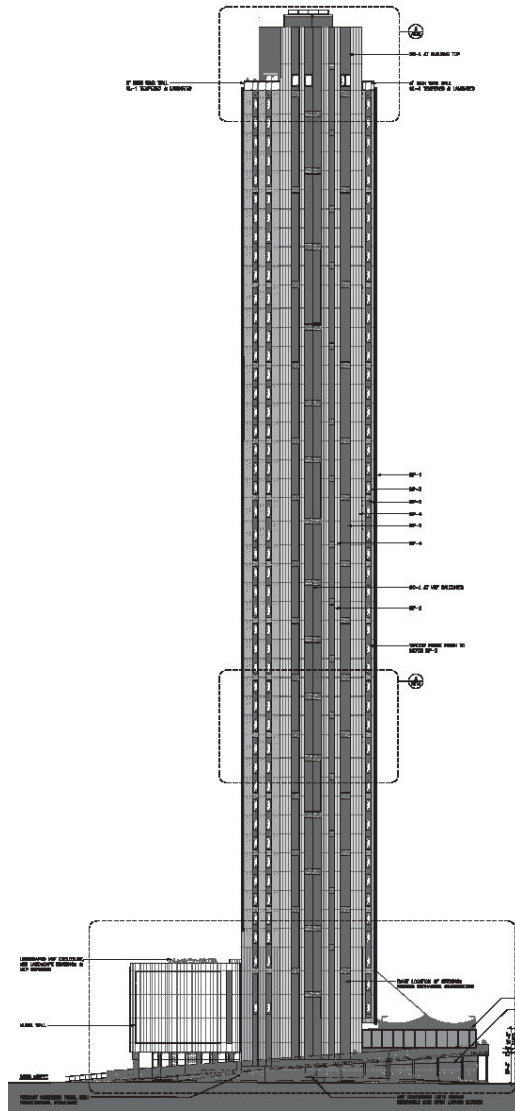


View looking south on FDR Drive from
East 93rd Street **15**

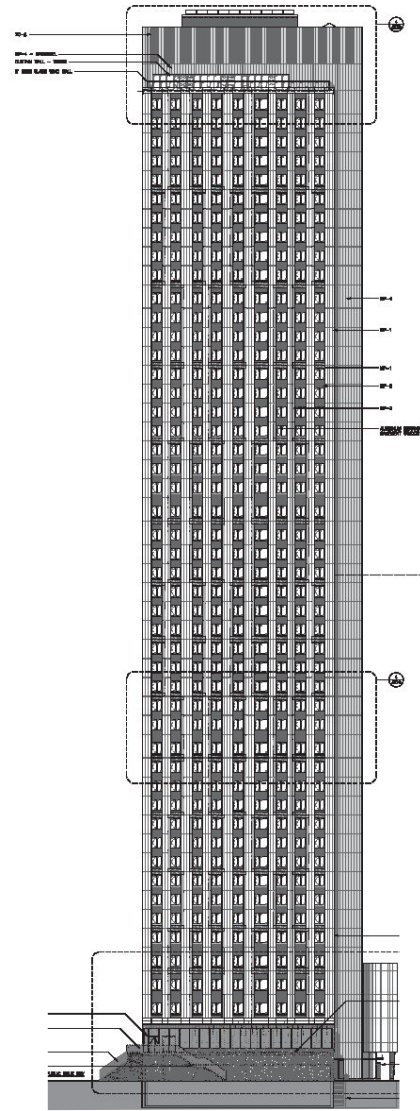


Proposed Project Site Plan
Figure H-11

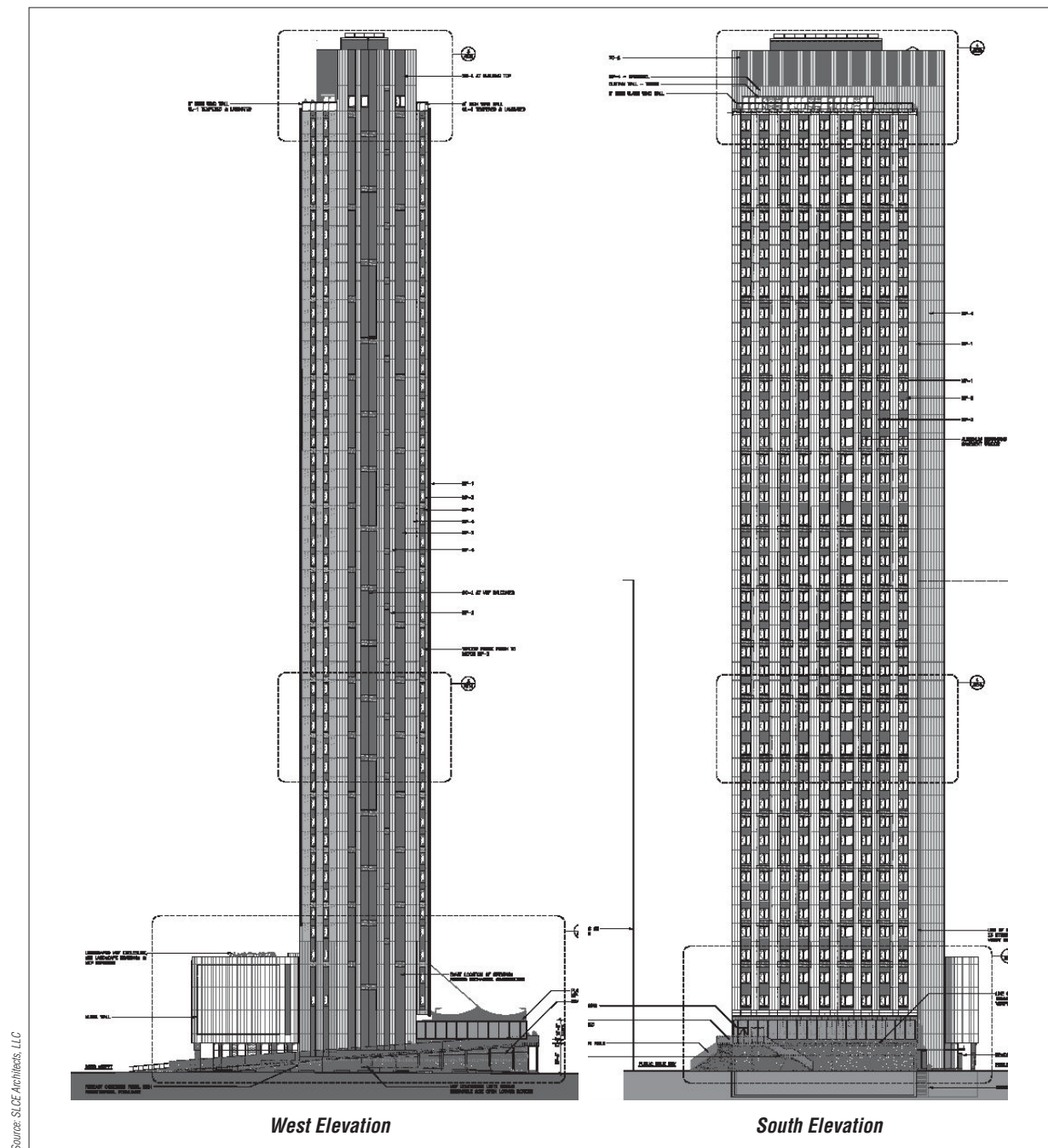
Source: SLCE Architects, LLC

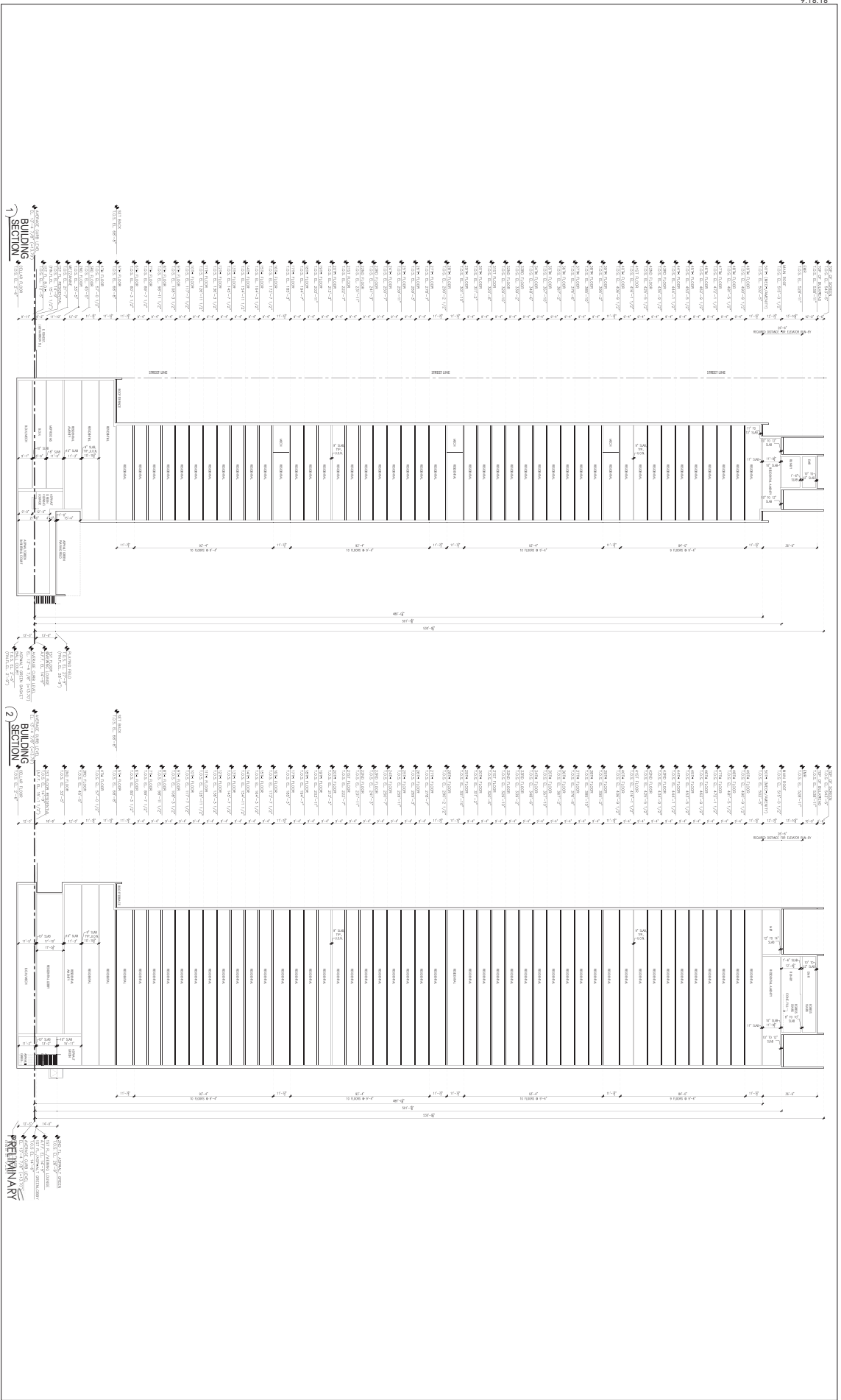


East Elevation



North Elevation







Source: EXFowle

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Project
Illustrative View from
East 92nd Street and York Avenue
Figure H-15



View looking onto project site on East 92nd Street
west of First Avenue **16**



View looking onto project site from
First Avenue and East 93rd Street **17**



View looking northwest from
York Avenue and East 91st Street **18**

Photographs of the Study Area
Figure H-16

The proposed project would be located on a portion of NYCHA's Holmes Towers development site, which includes two existing buildings; accordingly, the proposed project's size, massing, design and location are constrained by these existing buildings. The proposed project would be located within the same zoning lot as the NYCHA Holmes Towers development and would utilize development rights generated by this zoning lot. In order to develop the proposed project, mayoral zoning overrides of certain sections of the New York City Zoning Resolution related to height and setback, minimum distance between buildings, and open space ratio are being requested. These discretionary actions would require Mayoral approval and would only affect the project site. The zoning overrides would enable the proposed project to provide the maximum number of affordable units and supporting uses within the proposed project.

In general, the urban design of the project site in the With Action condition would differ from the existing conditions and No Action condition in several ways. The new building on the project site would be built to the lot line on East 92nd Street and thus would create a new street wall along this portion of the street. This street wall would be expected to enhance the pedestrian experience along adjacent sidewalks. At 50 stories, the height of the new residential tower would be considerably taller than the adjacent NYCHA structures; however, there are other tower developments in the study area, as described below and above. The proposed residential and community facility use of the proposed building would be consistent with surrounding uses.

STUDY AREA

The proposed project would not result in any changes to buildings, natural features, open spaces, street grid, or orientation and arrangement of streets in the study area. The proposed project also would enhance the visual character of the project site as compared to existing conditions and the No Action condition, and thus would enhance the pedestrian experience of the neighborhood. The proposed residential and community facility uses are consistent with the predominant land uses in the study area, and the proposed lot coverage is more consistent with the surrounding area than the lot coverage in existing conditions and No Action condition.

The new building on the project site would be built to the lot line on East 92nd Street and thus would create a new street wall along this portion of the street. This street wall would be expected to enhance the pedestrian experience along adjacent sidewalks. The proposed uses also would be expected to activate the streetscape along East 92nd Street.

The proposed project would change the urban design character in the study area, as the proposed 50-story building would be substantially taller than the existing residential towers in the study area. As described above, the existing residential towers in the study area are between 24 and 37 stories (210 to 353 feet) tall; therefore, the proposed building would be taller than existing buildings in the study area by approximately 170 feet. As such, it would be a prominent addition to surrounding view corridors, and would be more consistent in terms of height with the 63-story, 710-foot-tall building currently under development at Second Avenue and East 96th Street, northwest of the study area (see **Figure H-16**)

The proposed zoning overrides as described above would apply only to the project site, and thus would not result in any changes to urban design characteristics in the study area. The footprint of the proposed building would be slightly wider than those of the Holmes Towers development, and would be comparable in size to the Brittany Towers. The proposed building materials—metal panel and stone—would be compatible with the modern residential towers in the study area.

The proposed project would not involve an area-wide rezoning and would not result in substantial changes to the built environment of a historic district or components of a historic building that contribute to the resource's historic significance. Therefore, the proposed project would not be anticipated to adversely affect any urban design features of the project area or study area, and would not adversely affect the experience of the pedestrian.

VISUAL RESOURCES

PROJECT SITE

As described above, there are no visual resources on the project site. Therefore, the proposed project would have no significant adverse impacts on visual resources on the project site.

STUDY AREA

In the With Action condition, the proposed building would be prominent in views along surrounding streets, particularly along First Avenue and East 92nd Street, as well as from the East River Esplanade. The proposed building would be the tallest building in these views; however, it would not obstruct or eliminate views to any visual landmarks, or block any view corridors. The expansive views from the East River Esplanade within the study area would continue to include the river, the Robert F. Kennedy (Triborough) Bridge, and the Wards Island Bridge, as well as the tower portion of the project site development. Views south along the esplanade would continue to include the historic parabolic arch of Asphalt Green and the pedestrian bridge crossing the FDR Drive. As described above, the historic resources in the surrounding area are visually interesting but are not highly visible except along adjacent streets, and thus the proposed building would not be anticipated to adversely affect views to those resources.

Overall, the proposed project would have no significant adverse impacts on urban design or visual resources, or the pedestrian's experience of these characteristics of the built and natural environment. The proposed project would not adversely affect the urban design characteristics or visual character of the area. *

A. INTRODUCTION

This attachment addresses the potential for the presence of hazardous materials resulting from previous and existing uses both at the project site (which currently contains two play areas, landscaping, and walkways serving the surrounding Holmes Towers development) and in the surrounding area, and potential risks related to the proposed project with respect to any such hazardous materials. The proposed actions would require soil disturbance and excavation for the construction of a new 50-story (with a cellar) mixed-use residential and community facility building (the “proposed project”).

This assessment is based on a June 2017 *Phase I Environmental Site Assessment* (ESA) and an April 2018 *Subsurface (Phase II) Investigation Report*, both prepared by AKRF, Inc. (AKRF). The Phase I ESA included the findings of a reconnaissance of the project site, an evaluation of readily available historical information, and selected environmental databases and electronic records in accordance with American Society for Testing and Materials (ASTM) Standard E1527-13. The scope of the Phase II Investigation consisted of a geophysical survey; the installation of borings for collection and laboratory analysis of soil samples; the installation of temporary wells for collection and laboratory analysis of groundwater samples; and the installation of probes for collection and laboratory analysis of soil vapor samples.

B. EXISTING CONDITIONS

SUBSURFACE CONDITIONS

The project site is approximately 14 feet above mean sea level. Subsurface materials consist of historic fill (dark brown sand, silt, brick, gravel, glass, and cinders, with occasional pieces of ceramic and concrete, and coal fragments), which is underlain by apparent native brown sand and silt with a minor gravel component on top of weathered bedrock. Weathered bedrock was encountered between 5 feet bgs to 20 feet bgs. According to the USGS Bedrock and Engineering Geologic Maps of the region, the bedrock surface slopes steeply in this area of Manhattan, and may be encountered as shallow as a surface outcrop, to as deep as 40 feet bgs, within the immediate vicinity of the project site. In addition, a peat layer was encountered at depths of 12 feet bgs and 18 feet bgs in two soil borings.

Groundwater was first encountered between approximately 10 and 11.5 feet below grade. Based on regional topography, groundwater is assumed to flow in an approximately northeasterly direction towards the East River, approximately 380 feet away. Groundwater in Manhattan is not used as a source of potable water.

PHASE I ESA

The project site is located in a primarily residential area, with some commercial and institutional uses. Based on historical maps, the project site historically included: a coal yard and a lumber yard

as early as 1896. By 1911 and 1951, the project site was developed with a wagon house, a commercial and residential building, and a garage with gasoline tanks. By 1979, the project site was shown without structures.

The Phase I ESA identified Recognized Environmental Conditions (RECs), i.e., “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property” based on the above previous uses, and information reported to regulatory agencies for the project site or nearby. Regulatory records indicated that the west-adjacent property had an in-service 15,000-gallon No. 2 Fuel Oil underground storage tank (UST) and two closed-removed 25,000-gallon No. 2 Fuel Oil USTs. A tank removal report with respect to an adjacent property indicated that residual petroleum-impacted soil remains on the adjacent property. The west-adjacent property is also listed in the New York State Department of Environmental Conservation (NYSDEC) Spills database for closed-status Spill Nos. 09901814, 9811778 and 9806281. Former automotive, manufacturing, and dry cleaning uses were identified on the project site block and on south- and west-adjacent blocks, and tank and Spills listings were identified in the immediate vicinity of the project site.

In addition, the Phase I ESA noted that demolition debris from former structures may remain in the subsurface, and could contain lead-based paint, asbestos, or other regulated materials.

Based on the above a Phase II Subsurface Investigation was performed to assess subsurface conditions at the project site.

PHASE II SUBSURFACE INVESTIGATION

Based on the results of the Phase I ESA, a Sampling Protocol and Health and Safety Plan (Subsurface Phase II Work Plan) was submitted to the New York City Department of Environmental Protection (NYCDEP) in December 2017 and approved in a letter dated January 9, 2018. The Phase II scope included: a geophysical survey (to search for buried tanks and utilities), the advancement of 9 borings to 5 to 20 feet below grade (with collection and laboratory analysis of 18 soil samples); the installation of 4 temporary wells for collection and analysis of 4 groundwater samples (one additional sample was collected from a previously installed permanent monitoring well); and the installation of 5 probes for the collection and laboratory analysis of 5 soil vapor samples (an ambient air sample was also collected). The following pertinent observations were identified during the investigation:

- Subsurface materials consisted of historic fill material (dark brown sand, silt, brick, gravel, glass, and cinders, with occasional pieces of ceramic and concrete, and coal fragments) from the surface down to 5 to 6.5 feet below grade. The fill material was generally underlain by apparent native brown sand and silt with a minor gravel component, beneath which was apparent weathered bedrock starting at approximately 5 to 15 feet below grade. The water table was encountered at between approximately 10 and 11.5 feet below grade.
- No visual signs of contamination or odors were noted in any of the borings. Photoionization detector (PID) readings, indicating the presence of volatile organic compounds (VOCs) were non-detectable, except where natural peat was encountered.

A summary of the analytical results is as follows:

SOIL

- Soil sample analytical results were compared to the 6 New York Codes, Rules and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Restricted Residential Use Soil Cleanup Objectives (RRSCO).

- VOCs exceeded their respective UUSCOs in one shallow sample. No VOCs were detected at concentrations above their respective RRSCOs.
- Levels of certain polycyclic aromatic hydrocarbons (PAHs), a class of semivolatile organic compounds (SVOCs) frequently found in historical fill material (especially coal ash), exceeded the UUSCOs and/or RRSCOs in samples collected from the historic fill interval.
- Certain pesticides were detected at concentrations above the UUSCOs, but below the RRSCOs. Polychlorinated biphenyls (PCBs) were not detected in the soil samples at concentrations above the UUSCOs or RRSCOs.
- The metals barium, copper, lead, mercury, and zinc were detected at concentrations above their respective UUSCOs. Lead and mercury were additionally detected at concentrations above their respective RRSCOs. The aforementioned metals are commonly found in fill material, which was observed throughout the project site.

GROUNDWATER

- Groundwater analytical results were compared to NYSDEC Technical and Operational Guidance Series (TOGS) (1.1.1): Class GA Ambient Water Quality Standards (AWQSs). Class GA AWQS were developed assuming use of groundwater as a drinking source, a scenario that does not and will not occur at the project site.
- The VOC methyl tertiary butyl ether (MTBE), a historical unleaded gasoline additive, was detected above AWQS in one sample. The MTBE is likely related to a historical gasoline release (off-site as the project site's gasoline storage seemingly ended before MTBE was used). No other VOCs were detected at concentrations above their respective AWQSs.
- Six PAHs were detected at concentrations above their respective AWQSs in one of the five groundwater samples. These concentrations are believed to be associated with sediment in the groundwater sample and not attributable to a discharge or source of contamination at the Site.
- No pesticides or PCBs were detected in the groundwater samples.
- Unfiltered and filtered analyses for metals exhibited exceedances of the AWQSs; however, the detected levels are typical of New York City.

SOIL VAPOR

- Concentrations of VOCs detected in the soil vapor samples were compared to the New York State Department of Health (NYSDOH) 2006 Guidance for Evaluating Soil Vapor Intrusion/air guidance values (AGVs), the updated May 2017 NYSDOH Soil Vapor/Indoor Air Decision Matrices, the September 2013 NYSDOH Fact Sheet Update for Tetrachloroethene (PCE), and the August 2015 NYSDOH Fact Sheet Update for Trichloroethene (TCE). These values provide an extremely conservative means of comparison. As the AGVs are intended to be protective of indoor air, the comparison assumes that any soil vapor detected would completely penetrate into the building, a condition that would not be expected to actually occur.
- VOCs were detected in soil vapor, but only one, TCE, exceeded an indoor air AGV. As noted, that AGV is meant to apply to indoor air, not sub slab vapor, and because there is no building on the site, the AGV is overly conservative for determining the risk of vapor intrusion. The NYSDOH Matrix Values do apply to the risk of soil vapor intrusion. The 7.95 ug/m³ TCE concentration is on the extremely low end of sub-slab vapor values that NYSDOH's matrix evaluates for mitigation, monitoring or no further action. TCE concentrations between 6 ug/m³ and 59 ug/m³ require "no further action" if indoor air sampling shows that air inside of a building is relatively

unimpacted by subsurface vapor intrusion. Again, because there is no indoor air to sample here, the matrix cannot be fully applied. However, given the very low value of TCE detected, within 3 parts per billion of the lowest end the Matrix sets for any type of action (even just monitoring), the NYSDOH Matrix would likely require “no further action” if a structure was present on the site.

C. FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the proposed project (the “No Action” condition), the project site would remain as it is under existing conditions with no new construction. Without construction and consequent excavation and soil disturbance, pathways for human exposure to any contaminated materials present in the subsurface would be unchanged.

D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would entail construction of new buildings requiring excavation and soil disturbance for foundations, utilities, etc. Although construction activities could increase pathways for human exposure to any contaminated materials present in the subsurface, impacts would be avoided by incorporating the following into the proposed project:

- Based on the results of the Phase II, a Remedial Action Plan (RAP) and a Construction Health and Safety Plan (CHASP) have been prepared for the entire project site for NYC Department of Environmental Protection (DEP) review. DEP approved the RAP and CHASP in a letter dated May 31, 2018 (see **Appendix A**), and these plans would be implemented during the subsurface disturbance associated with the proposed project. The purpose of a RAP and CHASP is to address the contamination identified by the Phase II and provide measures to address any contingencies that may arise during construction, such as specifying appropriate measures to be implemented if USTs, soil, or groundwater contamination, or other unforeseen environmental conditions are encountered. The RAP would also include any measures that need to be incorporated into the new construction, e.g., water/vapor proofing the foundations (the cellar is anticipated to extend to approximately 15.5 feet below grade, i.e., below the water table, and up to approximately 25.5 feet below grade for one elevator pit).
- Applicable regulatory requirements would also be followed at the project site, e.g., in removal of the play equipment that could include lead-based paint; disposing of any excess soil off-site at appropriately licensed facilities; reporting to NYSDEC any signs of a petroleum spill (and removing and registering encountered tanks); and following DEP requirements during dewatering.

Construction in accordance with the DEP-approved RAP/CHASP and completion of a Professional Engineer-certified Remedial Closure Report at the conclusion of construction (for DEP approval) would be required through the Development Agreement between NYCHA and the Project Sponsor. The Development Agreement will require compliance with the RAP/CHASP. The Project Sponsor submitted an application to NYSDEC in June 2018 to investigate and remediate the building footprint portion of the project site under the New York State Brownfield Cleanup Program (BCP). As part of the BCP (a voluntary program), all remedial activities within the BCP boundary would fall under the requirements of a NYSDEC-approved Remedial Action Work Plan (RAWP) approved through issuance of a Decision Document, and all other applicable NYSDEC requirements. This would include similar procedures and measures as the DEP RAP/CHASP. Work outside of the proposed building footprint would be conducted under the DEP RAP. Absent enrollment in the BCP and for the portion of the project site outside the BCP

boundary, the local approvals obtained through DEP would apply during soil excavation and disturbance activities conducted throughout the project site.

With these remedial measures included as part of the proposed project, no significant adverse impacts related to hazardous materials would occur. *

A. INTRODUCTION

This attachment examines the potential effects of the proposed project on the study area transportation systems. As described in Attachment A, “Project Description and Screening Analyses,” the proposed actions would facilitate the development of a new, approximately 358,000-gross-square-foot (gsf) mixed-use residential and community facility building in the Yorkville neighborhood of Manhattan (the “proposed project”).

The project site is a portion of the New York City Housing Authority (NYCHA) John Haynes Holmes Towers (the “Holmes Towers development”), which is located within the block bounded by First Avenue, East 92nd Street, Franklin D. Roosevelt (FDR) Drive and York Avenue, and East 96th Street (see **Figure J-1**). The project site contains two play areas, landscaping, and walkways serving the Holmes Towers development.

In the future without the proposed project, the project site would remain unchanged. In the future with the proposed project, the project site would be developed with approximately 339 dwelling units (DUs), including approximately 169 affordable DUs, and 12,300 gsf of community facility space.

For the purposes of this transportation assessment, a slightly larger community facility program of approximately 13,500 gsf was analyzed. Because this is larger than the anticipated program under the proposed project, the analysis provides a conservative assessment of potential project-generated impacts. **Table J-1** provides a summary of the proposed development program analyzed in this attachment.

Table J-1

Proposed Development Program

Component	Size
Residential (DUs)	339
Community Facility (gsf)	13,484

The travel demand projections and screening assessments presented in this attachment were conducted pursuant to the methodologies outlined in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*. The travel demand projections and screening assessments were reviewed and approved by the New York City Department of Transportation on August 2, 2018.


B. PRELIMINARY ANALYSIS METHODOLOGY

The *CEQR Technical Manual* recommends a two-tier screening procedure for the preparation of a “preliminary analysis” to determine if quantified analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation analysis (Level 1) to estimate the volume of person and vehicle trips attributable to the proposed project. If the proposed project is expected to result in fewer than 50 peak-hour vehicle trips and fewer than 200 peak-hour

8/3/2018



 Project Site

0 200 FEET


transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the proposed project would result in 50 or more peak-hour vehicle trips at an intersection, 200 or more peak-hour subway trips at a station, 50 or more peak-hour bus trips in one direction along a bus route, or 200 or more peak-hour pedestrian trips traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, vehicular and pedestrian safety, and parking.

For the Level 2 screening analysis, project-generated trips would be assigned to specific intersections, transit routes, and pedestrian elements. If the results of this analysis show that the proposed project would generate 50 or more peak-hour vehicle trips through an intersection, 50 or more peak-hour bus riders on a bus route in a single direction, 200 or more peak-hour subway passengers at any given station, or 200 or more peak-hour pedestrian trips per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts.

C. LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the numbers of person and vehicle trips by mode expected to be generated by the proposed project during the weekday AM, midday, and PM peak hours. These estimates were then compared to the *CEQR Technical Manual* thresholds to determine if a Level 2 screening and/or quantified operational analyses would be warranted.

TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the proposed project were developed based on information from the *CEQR Technical Manual*, the 2012 *West Harlem Rezoning FEIS*, and U.S. Census Data—as summarized in **Table J-2**.

RESIDENTIAL

The daily person trip rate and temporal distribution for the residential component are from the *CEQR Technical Manual*. The directional distribution is from the *West Harlem Rezoning FEIS*. JTW data for the U.S. Census Bureau 2012–2016 ACS for Manhattan Census Tracts 144.02, 146.02, 152, 154, 156.01, 156.02, and 162 were used to estimate the modal splits. The vehicle occupancies are from the U.S. Census 2012–2016 ACS for autos and from the *West Harlem Rezoning FEIS* for taxis. The daily delivery trip rate and temporal and directional distributions are from the *CEQR Technical Manual*.

COMMUNITY FACILITY

The travel demand assumptions for the community facility use are all based on the *West Harlem Rezoning FEIS*.

Table J-2
Travel Demand Assumptions

Use	Residential			Community Facility		
Total Daily Person Trip	(1) Weekday 8.075 Trips / DU			(2) Weekday 44.7 Trips / KSF		
Trip Linkage	0%			0%		
Net Daily Person trip	Weekday 8.075 Trips / DU			Weekday 44.7 Trips / KSF		
Temporal	AM	MD	PM	AM	MD	PM
	(1)			(2)		
	10.0%	5.0%	11.0%	5.8%	7.4%	7.6%
Direction	(2)			(2)		
In	16%	50%	67%	66%	58%	34%
Out	84%	50%	33%	34%	42%	66%
Total	100%	100%	100%	100%	100%	100%
Modal Split	(3)			(2)		
	AM	MD	PM	AM	MD	PM
Auto	9.0%	9.0%	9.0%	4.0%	4.0%	4.0%
Taxi	5.0%	5.0%	5.0%	9.0%	9.0%	9.0%
Subway	57.0%	57.0%	57.0%	12.0%	12.0%	12.0%
Railroad	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%
Bus	12.0%	12.0%	12.0%	5.0%	5.0%	5.0%
Walk	15.0%	15.0%	15.0%	70.0%	70.0%	70.0%
Total	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(2)(3) Weekday			(2) Weekday		
Auto	1.17			1.40		
Taxi	1.40			1.40		
Daily Delivery Trip Generation Rate	(1) Weekday 0.06 Delivery Trips / DU			(2) Weekday 0.04 Delivery Trips / KSF		
Delivery Temporal	AM	MD	PM	AM	MD	PM
	(1)			(2)		
	12.0%	9.0%	2.0%	7.7%	11.0%	2.0%
Delivery Direction	(1)			(2)		
In	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%
Sources:						
(1) <i>CEQR Technical Manual</i>						
(2) <i>West Harlem Rezoning FEIS</i>						
(3) U.S. Census American Community Survey (ACS) 2012–2016 Journey-to-Work (JTW) Data for Manhattan Census Tracts 144.02, 146.02, 152, 154, 156.01, 156.02, and 162						

TRIP GENERATION SUMMARY

As summarized in **Table J-3**, the proposed project would generate a total of 308, 178, and 348 person trips during the weekday AM, midday, and PM peak hours, respectively. Approximately 44, 24, and 49 vehicle trips would be generated during the same respective peak hours.

Table J-3
Trip Generation Summary: Proposed Project

Program	Peak Hour	In/Out	Person Trip							Vehicle Trip			
			Auto	Taxi	Subway	Railroad	Bus	Walk	Total	Auto	Taxi	Delivery	Total
Residential 339 DUs	AM	In	4	2	25	1	5	7	44	3	8	1	12
		Out	21	11	131	5	28	34	230	18	8	1	27
		Total	25	13	156	6	33	41	274	21	16	2	39
	Midday	In	6	3	39	1	8	10	67	5	3	1	9
		Out	6	3	39	1	8	10	67	5	3	1	9
		Total	12	6	78	2	16	20	134	10	6	2	18
	PM	In	18	10	115	4	24	30	201	15	9	0	24
		Out	9	5	57	2	12	15	100	8	9	0	17
		Total	27	15	172	6	36	45	301	23	18	0	41
Community Facility 13,484 gsf	AM	In	1	2	3	0	1	16	23	1	2	0	3
		Out	0	1	1	0	1	8	11	0	2	0	2
		Total	1	3	4	0	2	24	34	1	4	0	5
	Midday	In	1	2	3	0	1	18	25	1	2	0	3
		Out	1	2	2	0	1	13	19	1	2	0	3
		Total	2	4	5	0	2	31	44	2	4	0	6
	PM	In	1	1	2	0	1	11	16	1	3	0	4
		Out	1	3	4	0	2	21	31	1	3	0	4
		Total	2	4	6	0	3	32	47	2	6	0	8
Total	AM	In	5	4	28	1	6	23	67	4	10	1	15
		Out	21	12	132	5	29	42	241	18	10	1	29
		Total	26	16	160	6	35	65	308	22	20	2	44
	Midday	In	7	5	42	1	9	28	92	6	5	1	12
		Out	7	5	41	1	9	23	86	6	5	1	12
		Total	14	10	83	2	18	51	178	12	10	2	24
	PM	In	19	11	117	4	25	41	217	16	12	0	28
		Out	10	8	61	2	14	36	131	9	12	0	21
		Total	29	19	178	6	39	77	348	25	24	0	49

LEVEL 1 SCREENING*TRAFFIC*

As shown in **Table J-3**, the incremental trips generated by the proposed project would be 44, 24, and 49 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. Since these increments do not exceed the *CEQR Technical Manual* analysis threshold of 50 peak-hour vehicle trips, a detailed traffic analysis is not warranted and the proposed project is not expected to result in any significant adverse traffic impacts.

PARKING

The *CEQR Technical Manual* states that if a quantified traffic analysis is not required, an assessment of parking supply and utilization is also not warranted. Therefore, as a result of the

conclusions described above for traffic, an on- and off-street parking analysis is not required and the proposed project is not expected to result in any significant adverse parking impacts.

TRANSIT

As shown in **Table J-3**, the incremental subway trips generated by the proposed project would be 160, 83, and 178 person trips during the weekday AM, midday, and PM peak hours, respectively. Since these increments do not exceed the *CEQR Technical Manual* analysis threshold of 200 or more peak-hour subway trips, a detailed analysis of subway facilities or line-haul conditions is not warranted and the proposed project is not expected to result in any significant adverse subway impacts.

As shown in **Table J-3**, the incremental railroad trips generated by the proposed project would be 6, 2, and 6 person trips during the weekday AM, midday, and PM peak hours, respectively. Since these increments do not exceed the *CEQR Technical Manual* analysis threshold of 200 peak-hour trips made by rail, a detailed analysis of rail facilities is not warranted and the proposed project is not expected to result in any significant adverse rail impacts.

For buses, as summarized in **Table J-3**, the incremental bus trips generated by the proposed project would be 35, 18, and 39 person trips during the weekday AM, midday, and PM peak hours, respectively. These incremental bus trips would not exceed the *CEQR Technical Manual* analysis threshold of 50 or more peak-hour bus riders in a single direction. Therefore, a detailed bus line-haul analysis is also not warranted and the proposed project is not expected to result in any significant adverse bus line-haul impacts.

PEDESTRIANS

All incremental person trips generated by the proposed project would traverse the pedestrian elements (i.e., sidewalks, corners, and crosswalks) surrounding the project site. As shown in **Table J-3**, the incremental pedestrian trips would be greater than 200 during the weekday AM and PM peak hours. A Level 2 screening assessment has been conducted to determine if there is a need for additional quantified pedestrian analyses.

D. LEVEL 2 SCREENING ASSESSMENT

As part of the Level 2 screening assessment, project-generated trips were assigned to specific intersections and pedestrian elements near the project site. As previously stated, further quantified analyses to assess the potential impacts of the proposed project on the transportation system would be warranted if the trip assignments identify key pedestrian elements incurring 200 or more peak-hour pedestrian trips.

SITE ACCESS AND EGRESS

As described above, the project site would be developed with residential and community facility uses. The residential entrance would be located just off East 92nd Street, on the west side of the project site, and the entrance for the community facility would be located just off East 92nd Street, on the east side of the project site.

PEDESTRIANS

Level 2 pedestrian trip assignments were individually developed for all the proposed uses for the proposed project, and discussed below.

Bellwether at Yorkville

- Auto Trips—Motorists would seek parking at off-street parking facilities in the study area. Motorists parking at off-site facilities would walk to and from these off-street parking facilities.
- Taxi Trips—Taxi patrons would get dropped off and picked up along East 92nd Street, First Avenue, Second Avenue, and York Avenue in the vicinity of the project site.
- City Bus Trips—City bus riders would take buses stopping on First Avenue and Second Avenue.
- Subway Trips—Subway riders were assigned to the Second Avenue’s 96th Street station (Q train) and the Lexington Avenue’s 96th Street station (No. 6 train).
- Walk-Only Trips—Pedestrian walk-only trips were developed by distributing project-generated person trips to area pedestrian facilities (i.e., sidewalks, corner reservoirs, and crosswalks) based on population data as well as the land use characteristics of the surrounding neighborhood.

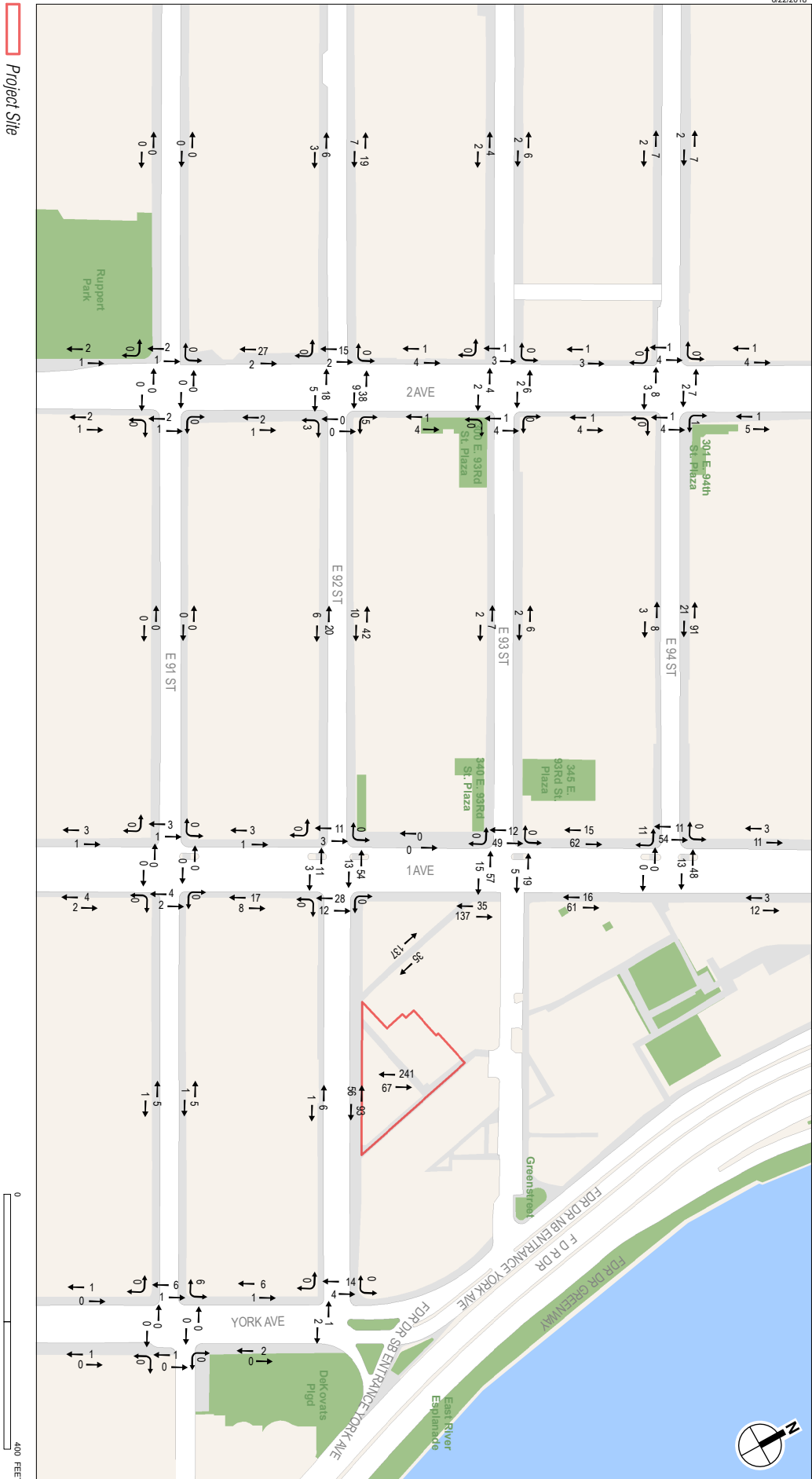
SUMMARY

The estimated project-generated pedestrian trips are shown in **Figures J-2 through J-4**. According to the *CEQR Technical Manual*, pedestrian elements with 200 or more incremental peak-hour vehicle trips as a result of a proposed project would have the potential for significant adverse traffic impacts and should be assessed in a quantified traffic impact analysis. As shown and summarized in **Table J-4**, the maximum number of incremental vehicle trips for any particular pedestrian element during a peak hour would be 192, which is fewer than the *CEQR Technical Manual* analysis threshold of 200 peak-hour pedestrian trips. Therefore, a detailed pedestrian analysis is not warranted and the proposed project is not expected to result in any significant adverse pedestrian impacts.

Table J-4
Pedestrian Level 2 Screening Analysis Results

Pedestrian Elements	Weekday		
	AM	Midday	PM
(1) First Avenue and East 94th Street			
North Sidewalk along East 94th Street between First Avenue and Second Avenue	112	59	124
Northwest Corner	126	69	140
(2) First Avenue and East 93rd Street			
East Sidewalk along First Avenue between East 92nd Street and East 93rd Street	172	95	192
Southwest Corner	133	72	148
(3) First Avenue and East 92nd Street			
North Sidewalk along East 92nd Street between York Avenue and First Avenue	149	100	174
Northeast Corner	107	64	121
Note: Pedestrian elements with 100 or greater project-generated pedestrian trips in a peak hour are shown in this table			

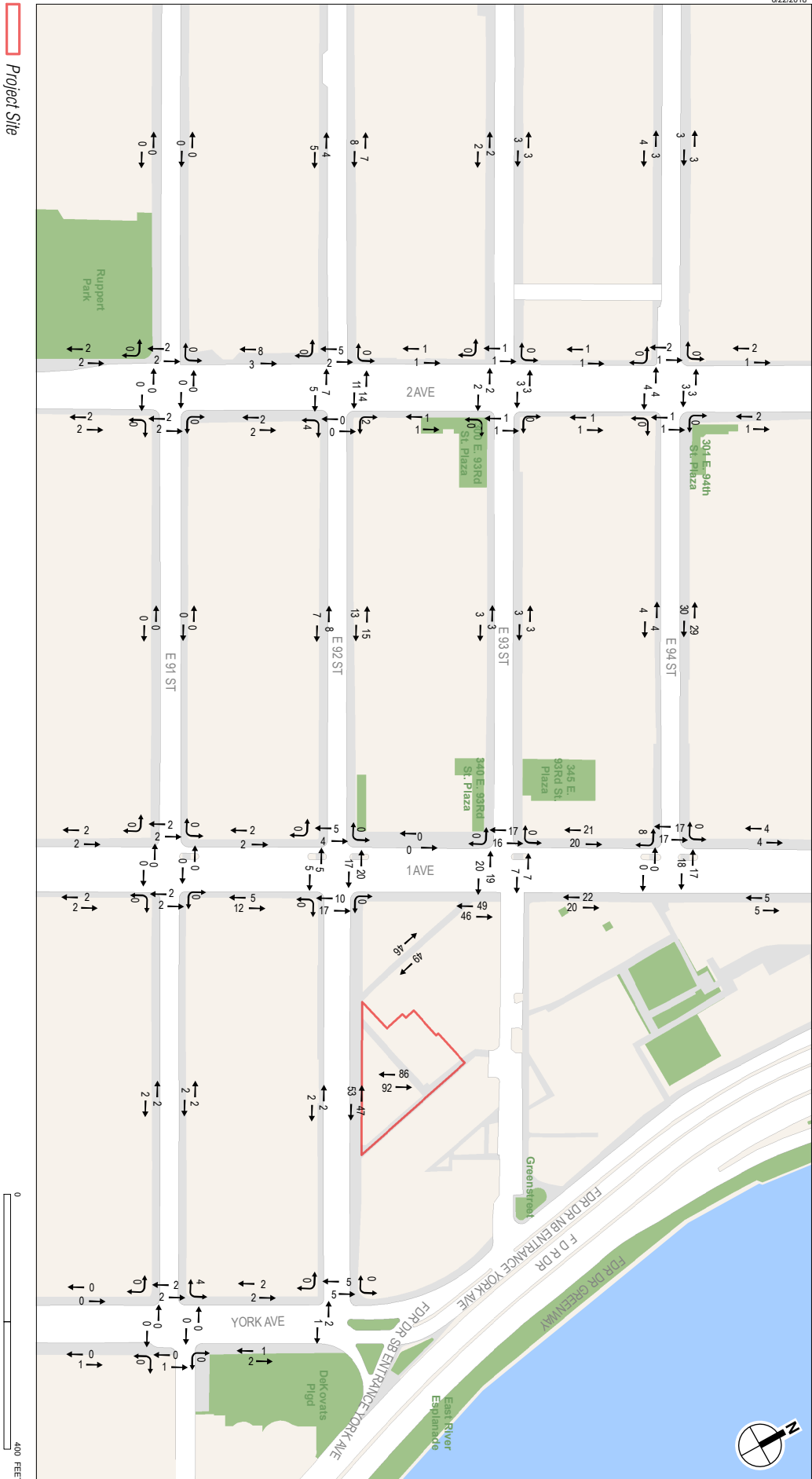
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Project Site

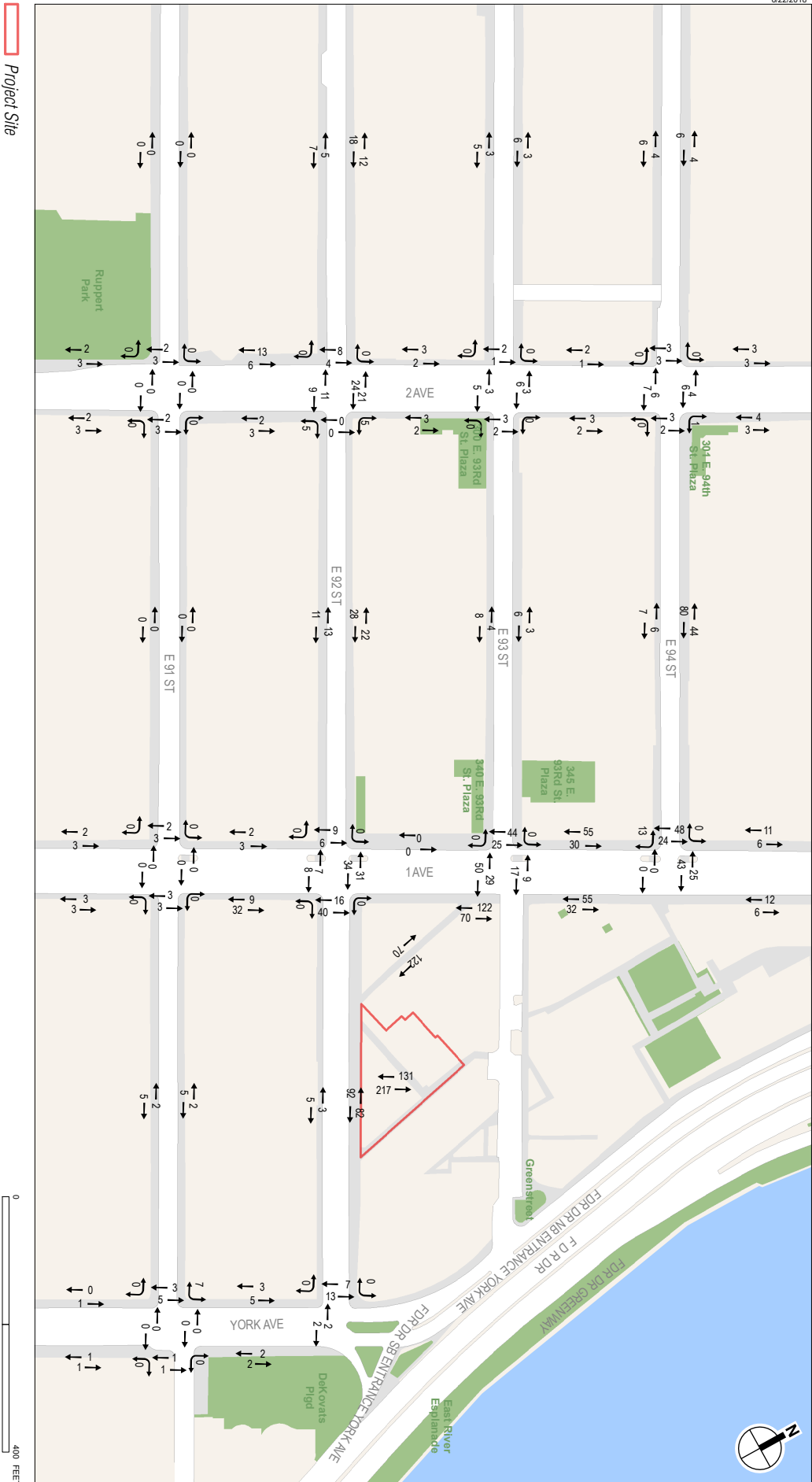
BELLWEHER AT YORKVILLE

Proposed Project Incremental Pedestrian Trips
Weekday AM Peak Hour
Figure J-2



BELLWETHER AT YORKVILLE

Proposed Project Incremental Pedestrian Trips
Weekday Midday Peak Hour
Figure J-3



BELLWEATHER AT YORKVILLE

Proposed Project Incremental Pedestrian Trips
Weekday PM Peak Hour
Figure J-4

A. INTRODUCTION

The potential for air quality impacts associated with the proposed project is assessed in this attachment. As discussed in Attachment J, “Transportation,” the proposed project is not expected to significantly alter traffic conditions. Since the proposed project would not exceed any thresholds defined in the 2014 *City Environmental Quality Review (CEQR) Technical Manual* for traffic analysis, it is assumed that the maximum hourly increase in traffic volume due to the proposed project would not exceed the carbon monoxide (CO) or the particulate matter (PM) emission screening thresholds defined in the *CEQR Technical Manual* (170 auto trips for peak hour trips at nearby intersections in the study area for CO and PM emission equivalent to 12 to 23 heavy-duty vehicles, depending on roadway type.) Therefore, no mobile source analysis is required.

The proposed actions would facilitate the development of a new approximately 358,000-gross-square foot (gsf) mixed-use residential and community facility building in the Yorkville neighborhood of Manhattan (the “proposed project”). Since the proposed project could potentially include fuel-fired heat and hot water systems, a stationary source analysis was conducted to evaluate the potential impact from these sources on air quality.

In addition to emissions from proposed project components, existing nearby large sources and industrial/manufacturing facilities were reviewed to determine if potential effects of emissions from these facilities on air quality at the project site need to be assessed. One large permitted facility that requires evaluation was identified and assessed.

As discussed in detail below, the proposed project would not result in any significant adverse impacts on air quality.

B. METHODOLOGY

OVERVIEW AND APPROACH

Stationary source analyses were conducted using the methodology described in the *CEQR Technical Manual* to assess air quality impacts associated with emissions from the proposed project’s heat and hot water systems. The analysis conservatively assumed the use of No. 2 fuel oil. Note that current plans indicate that the proposed project would likely use electric heating systems and natural gas fired hot water systems, which would result in substantially lower emissions. Therefore, this approach is conservative. Initial screening was undertaken using basic project information and applying thresholds defined in the *CEQR Technical Manual*, and further screening was prepared using the U.S. Environmental Protection Agency’s (EPA) AERSCREEN model to evaluate potential 1-hour average nitrogen dioxide (NO₂), 1-hour average sulfur dioxide (SO₂), and 24-hour and annual average concentrations of PM less than 2.5 micrometers in diameter (PM_{2.5}), which are not included in the initial screening procedure.

Potential 1-hour average NO₂ concentrations, added to representative background concentrations in the area, were compared with the National Ambient Air Quality Standards (NAAQS). Potential 24-hour and annual average incremental concentrations of PM_{2.5} were compared with the PM_{2.5} *de minimis* criteria defined in the *CEQR Technical Manual*:

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Annual average PM_{2.5} concentration increments which are predicted to be greater than 0.1 µg/m³ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources); or
- Annual average PM_{2.5} concentration increments which are predicted to be greater than 0.3 µg/m³ at a discrete location (elevated or ground level).

The above criteria were also applied to the evaluation of the potential impact of existing large sources in the study area on air quality at the proposed project.

The potential impacts from nearby industrial and large sources on other hazardous air pollutant concentrations within the proposed project area were also evaluated. The New York State Department of Environmental Conservation (NYSDEC) Division of Air Resources (DAR) guidance document DAR-1¹ contains a compilation of annual and short term (1-hour) guideline concentrations for these compounds. For non-criteria hazardous air pollutants, predicted exceedance of the DAR-1 guideline concentrations would be considered a potential significant adverse impact.

HEAT AND HOT WATER SYSTEMS

INITIAL SCREENING ANALYSIS

An initial screening analysis was undertaken using the methodology described in Chapter 17, Section 322.1 of the *CEQR Technical Manual*. This analysis determines the threshold of development size below which the action would not have a significant adverse impact relative to CO, PM less than 10 micrometers in diameter (PM₁₀), 3-hour average SO₂, and annual average NO₂ NAAQS levels (see “AERSCREEN Analysis” below for additional standards). The screening is based on the distance from the development to the nearest building of similar or greater height. The screening procedure uses information regarding the type of fuel to be burned, the development type and maximum size, and the exhaust stack height to evaluate whether or not a significant impact is possible.

The initial screening was based on a 364,973 gsf building, with the nearest receptor of similar or greater height at a distance of over 400 feet. This floor area is slightly larger than the anticipated floor area for the proposed project, and therefore provides for a conservative assessment of potential pollutant concentrations.

AERSCREEN ANALYSIS

Potential 1-hour average NO₂ and 24-hour and annual average PM_{2.5} impacts from the proposed project’s heat and hot water system’s emissions were evaluated using the latest version of EPA’s AERSCREEN model (version 16216). The AERSCREEN model projects worst-case 1-hour average concentrations downwind from a point, area, or volume source, and longer-period

¹ NYSDEC. DAR-1 (Air Guide-1) AGC/SGC Tables. August 2016.

averages are estimated by multiplying the 1-hour results by persistence factors established by EPA or provided in the *CEQR Technical Manual*. AERSCREEN generates application-specific worst-case meteorology using representative minimum and maximum ambient air temperatures, and site-specific surface characteristics such as albedo, Bowen ratio, and surface roughness length.² The AERSCREEN model was used to calculate worst-case ambient concentrations of NO₂ and PM_{2.5} from the proposed project downwind of the stack.

The model incorporates the Plume Rise Model Enhancements (PRIME) downwash algorithm, which is designed to predict concentrations in the “cavity region” (i.e., the area around a structure which under certain conditions may affect an exhaust plume, causing a portion of the plume to become entrained in a recirculation region). AERSCREEN uses the Building Profile Input Program for PRIME (BPIPPRM) to provide a detailed analysis of downwash influences on a direction-specific basis. AERSCREEN also incorporates AERMOD’s complex terrain algorithms and utilizes the AERMAP terrain processor to account for the actual terrain in the vicinity of the source on a direction-specific basis.

The AERSCREEN model was run both with and without the influence of building downwash, using urban diffusion coefficients that were based on a review of land-use maps of the area. Other model options were selected based on EPA guidance.

Maximum 1-hour average NO₂ concentrations were estimated using an NO₂ to NO_x ratio of 0.8—the recommended default ambient ratio per EPA guidance.³

Emission Rates and Stack Parameters

Annual emission rates for heating and hot water systems were calculated based on fuel consumption estimates, using energy intensity estimates based on type of development and size of the building (364,973 gsf)⁴ as recommended in the *CEQR Technical Manual*, and applying emission factors for oil-fired boilers.⁵ PM_{2.5} emissions include both the filterable and condensable components. The short-term emission rates (24-hour and shorter) were calculated by scaling the annual emissions to account for a 100-day heating season. The exhaust from the heat and hot water systems was assumed to be vented through a single stack located 3.0 feet above the roof of the building at a height of at least 489 feet above grade.⁶

² Albedo is the fraction of the total incident solar radiation reflected by the ground surface. The Bowen ratio is the ratio of the sensible heat flux to the latent (evaporative) heat flux. The surface roughness length is related to the height of obstacles to the wind flow and represents the height at which the mean horizontal wind speed is zero based on a logarithmic profile.

³ EPA. Memorandum: Clarification on the use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO₂ National Ambient Air Quality Standard. September 30, 2014.

⁴ This floor area is slightly larger than the anticipated floor area for the proposed project (approximately 358,000 gsf), and therefore provides for a conservative assessment of potential pollutant concentrations.

⁵ EPA. *Compilation of Air Pollutant Emission Factors AP-42*. 5th Ed., V. I, Ch. 1.3. September, 1999.

⁶ Recent design considerations indicate that the roof, and subsequently the stack height, may be higher (by approximately 40 feet). In general, a higher stack would result in more dispersion and lower concentrations at receptors. Since there are no buildings taller than the proposed project in the vicinity, this change would not substantially affect the results presented here, and the results would be conservatively high.

To calculate exhaust velocity, the fuel consumption of the proposed project was multiplied by EPA's fuel factor for No. 2 fuel oil,⁷ providing the exhaust flow rate at standard temperature; the flow rate was then corrected for the exhaust temperature, and exhaust velocity was calculated based on the stack diameter. Assumptions for stack diameter and exhaust temperature for the proposed systems were obtained from a survey of boiler exhaust data prepared and provided by New York City Department of Environmental Protection (DEP),⁸ and were used to calculate the exhaust velocity.

The emission rates and exhaust stack parameters used in the modeling analyses are presented in **Table K-1**.

Table K-1
Exhaust Stack Parameters and Emission Rates

Stack Parameter	Value
Stack Height (feet) ⁽¹⁾	492
Stack Diameter (feet)	3.2
Exhaust Velocity (meters/second) ⁽²⁾	0.58
Exhaust Temperature (degrees Fahrenheit) ⁽²⁾	307.8
Emission Rate (grams/second)	
SO ₂ (1-hour average)	0.002
NO ₂ (1-hour average)	0.167
PM _{2.5} (24-hour average)	0.018
PM _{2.5} (Annual average)	0.005
Notes:	
¹ Recent design considerations indicate that the roof, and subsequently the stack height, may be somewhat higher (by approximately 40 feet). In general, a higher stack would result in more dispersion and lower concentrations at receptors. Since there are no buildings taller than the proposed project in the vicinity, this change would not substantially affect the results presented here, and the results would be conservatively high.	
² Stack parameter assumptions are based on boiler specifications for similar sized systems from <i>DEP Boiler Permit Database</i>	

Background Concentrations

To estimate the maximum projected total 1-hour average NO₂ concentration at a given receptor, the projected concentration increment from the source was added to corresponding background concentration of 120.8 µg/m³. This background level represents the 3-year average (2014–2016) of the annual 98th percentile of the daily-highest 1-hour average NO₂ concentrations (this is the statistical form of the standard) monitored at the nearest NYSDEC background monitoring station—Intermediate School 52, Manhattan. Note that the maximum concentration increment would not necessarily coincide with the maximum background levels, and, therefore, this approach results in a conservatively high estimate.

PM_{2.5} impacts are assessed on an incremental basis and compared with the PM_{2.5} *de minimis* criteria. The PM_{2.5} 24-hour average background concentration of 22.3 µg/m³ from the JHS 45 ambient monitoring station was used to establish the *de minimis* value of 6.3 µg/m³ (based on the 98th percentile concentration, averaged over the years 2014–2016).

⁷ EPA. *Standards of Performance for New Stationary Sources*. 40 CFR Chapter I Subchapter C Part 60. Appendix A-7, Table 19-2. 2013.

⁸ DEP. *Boiler Database*. Personal communication from Mitchell Wimbish on August 11, 2017.

Receptor Placement

Receptors (locations at which concentrations are projected) generally include operable windows in residential or other buildings, air intakes, and publicly accessible open space locations, as applicable. The nearest building of similar or greater height is located at a distance of over 400 feet from the proposed project. Receptors representing the nearest lower buildings, ranging from 200 to 385 feet in height, were modeled at distances ranging from 45 to 363 feet. Lower receptors were also included at those same distances, and the worst-case ground level concentration was also evaluated.

EXISTING INDUSTRIAL FACILITIES

Potential sources of toxic pollutants emitted from the exhaust vents of existing industrial facilities were examined to identify any potential adverse impacts on future residents of the proposed project. All industrial and manufacturing uses within 400 feet of the project site (“industrial source study area”) were considered for inclusion in the air quality impact analyses.

Land use maps and aerial photographs were reviewed to identify potential sources of emissions from manufacturing/industrial operations. A search of federal, state, and City compliance and permit data within the study area was conducted using DEP’s Clean Air Tracking System (CATS) database⁹ and EPA’s Envirofacts database.¹⁰ A request was then made to DEP’s Bureau of Environmental Compliance (BEC) to obtain the certificates of operation for the identified industrial sources in order to determine whether manufacturing or industrial emissions occur.

The air permit information provided was compiled into a database of source locations, air emission rates if available, and other data pertinent to determining potential source impacts, described below. No sources requiring analysis were identified.

EXISTING LARGE SOURCES

The *CEQR Technical Manual* requires an analysis of the potential impact on projects in cases where the project may result in sensitive uses being located near a “large” or “major” emissions source. Major sources are defined as those located at facilities that have a NYSDEC Title V or Prevention of Significant Deterioration air permit, while large sources are defined as those located at facilities that require a state facility permit.

To assess the potential effects of these types of existing sources on the proposed project, a review of existing permitted facilities was conducted.¹¹ Within a 1,000-foot study area boundary (the distance referenced in the *CEQR Technical Manual*), sources permitted under the NYSDEC’s Title V and state facility permits programs were considered. One facility with a state facility permit was identified: the New York City Department of Sanitation (DSNY) East 91st Street Marine Transfer Station, located at on the East River approximately 500 feet east of the project site.¹² The facility, which is not yet operational, will be used by the City of New York to implement the Long Term Export Program for the containerization and transport of managed waste from the City by barge and/or rail. The facility has emissions from exempt combustion sources and trial activities

⁹ DEP. *Clean Air Tracking System database*. <https://a826-web01.nyc.gov/DEP.BoilerInformationExt>. Accessed 11/21/2017.

¹⁰ EPA. *Envirofacts Data Warehouse*. <https://www3.epa.gov/enviro/>. Accessed 11/21/2017.

¹¹ NYSDEC. *Access to DEC Air Permits*. <http://www.dec.ny.gov/chemical/32249.html>. Accessed 11/22/2017.

¹² NYSDEC. Permit 2-6204-00007/00016.

and is capping its nitrogen oxides (NO_x) emissions to less than 22.5 tons per 12-month rolling period. The permit does not include any detailed information on the emissions sources, but the potential impact of emissions from the facility on pollutant concentrations at the proposed development was evaluated based on an existing study of the facility's potential impact on air quality prepared for the CEQR final environmental impact statement (FEIS) evaluation of the municipal solid waste management plan and updated in a subsequent Technical Memorandum.^{13,14}

C. POTENTIAL IMPACTS OF THE PROPOSED PROJECT

HEAT AND HOT WATER SYSTEMS

The results of the simplified screening analysis are presented in **Figure K-1**. The distance below which impacts might occur on buildings of similar height was estimated at 209 feet. The distance to the nearest building of similar height would be greater than 400 feet, which is further from the source, indicating that no significant impact is projected. Since 24-hour average SO₂ is the critical pollutant in this analysis (based on the old SO₂ standard), impacts would also not be expected for the 3-hour average SO₂, PM₁₀, annual NO₂, and CO standards.

The results of the AERSCREEN analysis for 1-hour average SO₂ and NO₂, and 24-hour and annual average PM_{2.5} are presented in **Table K-2**. No exceedance of criterial levels was identified in the AERSCREEN analysis. Overall, based on the two analyses, the proposed project's heating and hot water system would not result in any significant adverse air quality impacts. Note that current plans indicate that the proposed project would likely use electric heating systems and natural gas fired hot water systems, which would result in substantially lower emissions and ensuing concentrations.

Table K-2
Maximum Modeled Pollutant Concentrations (µg/m³)

Pollutant	Averaging Period	Maximum Modeled Impact	Background	Total Concentration	Criterion
NO ₂	1-hour	18 ⁽¹⁾	120.8	138.8	188 ⁽²⁾
SO ₂	1-hour	0.24	28.1	28.3	196 ⁽²⁾
PM _{2.5}	24-hour	1.4	N/A	N/A	6.3 ⁽³⁾
	Annual	0.1	N/A	N/A	0.3 ⁽⁴⁾
Notes: N/A—Not Applicable ⁽¹⁾ The 1-hour average NO ₂ concentration is estimated using NO ₂ to NO _x ratio of 0.8 as per EPA guidance. ⁽²⁾ NAAQS ⁽³⁾ PM _{2.5} <i>de minimis</i> criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m ³ ⁽⁴⁾ PM _{2.5} <i>de minimis</i> criteria—annual (discrete receptor)					

EXISTING INDUSTRIAL EMISSIONS

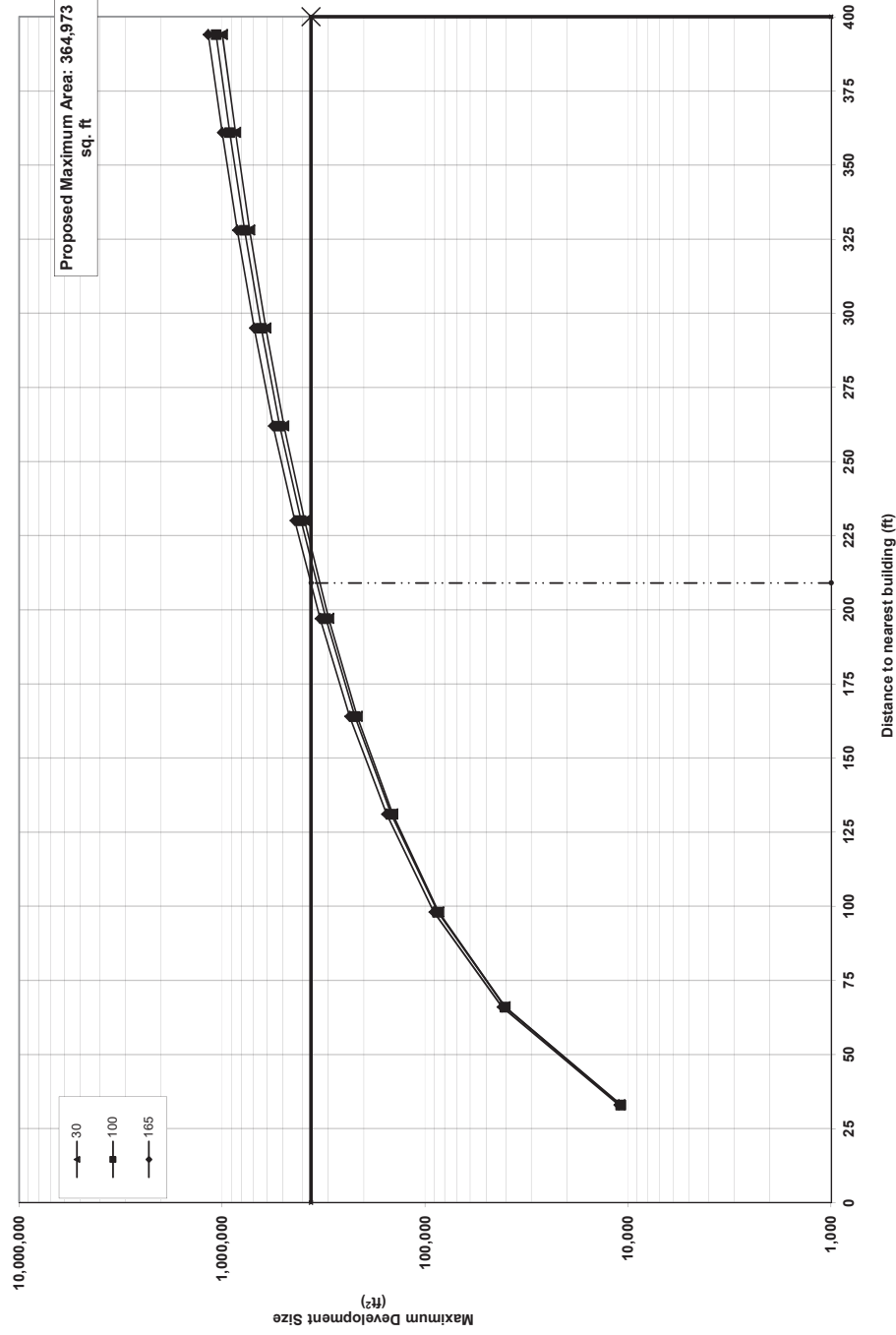
Eight sites with the potential for industrial emissions were identified through review of land use maps, aerial and street photography, and the industrial permit searches described above:

¹³ DSNY. Technical Memorandum: Comprehensive Solid Waste Management Plan. CEQR No. 03DOS004Y. Revised July 2012.

¹⁴ DSNY. FEIS for the New York City Comprehensive Solid Waste Management Plan. CEQR No. 03DOS004Y. April 1, 2005.

FIG App 17-5
SO₂ BOILER SCREEN
RESIDENTIAL DEVELOPMENT - FUEL OIL #2

HVAC Screening Analysis
 Site: Bellwether at Yorkville
 Date: 12/14/2017
 Pass



Stack Height: 492 ft
 Distance to Nearest Building of Similar or Greater Height: 400 ft
 Proposed Maximum SQFA: 364,973 sq. ft
 Minimum Allowable Distance to Nearest Building: 209 ft

Notes:

- The area along the East River waterfront from approximately East 90th Street to East 93rd Street is zoned for manufacturing use. The area includes the East 91st Street Marine Transfer Station, which is evaluated separately as a potential large source (see below).
- Block 1571 Lot 34 (432 East 92nd Street) is defined as industrial/manufacturing land use. The facility is a parking garage, and would not have any toxic industrial emissions.
- Block 1570 Lots 29 and 31 (440 and 434 East 91st Street) are defined as industrial/manufacturing land use. Both locations include only storage facilities, and would not have any toxic industrial emissions.
- Two dry cleaners were identified at 1779 and 1814 First Avenue. The dry cleaner at 1779 First Avenue has a current permit for use of perchloroethylene in dry cleaning operations. It is not known if either facility is processing on-site, but since the use and emission of perchloroethylene is now controlled by regulation, no further analysis is necessary.
- Block 1571 Lot 5 (403 East 91st Street) includes Eli's Bread, a bakery, and Block 1570 Lot 36 (426 East 91st Street) was the previous location with a canceled permit. The permits were for boiler emissions only. While some emissions of ethanol would be produced as a byproduct of the usage of yeast cultures, these quantities are small and are would not be of concern at the project site.¹⁵

Based on this review, there are no industrial sites with potential to significantly impact air quality at the project site, and no analysis is necessary.

EXISTING LARGE SOURCES

The existing CEQR study of the East 91st Street Marine Transfer Station, prepared for the CEQR FEIS and updated in the Technical Memorandum evaluated the potential air quality implications of the facility's operations in detail. The facility is currently under construction and is expected to be operational by time the proposed project is operational. Sources at the facility were projected to include refuse trucks arriving, transferring material, and departing; non-road engines processing material for transfer within the building; air handling units; and tug boats arriving and departing. The analysis considered all criteria pollutants, road dust, hazardous air pollutants, and odors. The latest analysis was completed in 2012 using methods consistent with current CEQR methodology and recent EPA emissions and dispersion models, and applying the same criteria for significance as described above. The study evaluated potential impacts at locations surrounding the facility, including ground-level receptors in publicly accessible open spaces and elevated receptors in residential buildings including buildings that are taller than the facilities rooftop vents and are located between the facility and the proposed project. These worst-case concentrations and concentration increments would be higher than concentrations that would occur further downwind at the proposed project building façades and rooftop open spaces.

The conclusion of the Technical Memorandum was that there would be no significant adverse air quality impacts associated with the marine transfer station, and therefore, the marine transfer station would not have a significant adverse impact on air quality at the project site. *

¹⁵ The project site is approximately 180 feet from the potential bakery vents, with larger buildings in between. A recent detailed analysis of a similar facility located immediately adjacent to residential receptors concluded that ethanol concentrations would be 1,000 times lower than the relevant health criterion. See—Office of the Deputy Mayor for Housing and Economic Development. *Spofford Campus Final Environmental Impact Statement*. CEQR No. 17DME001X. February 2, 2018.

A. INTRODUCTION

As discussed in Attachment J, “Transportation,” the number of vehicle trips generated by the proposed project is lower than the threshold that would require detailed analysis. Therefore, it is not expected that the proposed project would generate sufficient traffic to have the potential to cause a significant noise impact (i.e., it would not result in a doubling of noise passenger car equivalents [Noise PCEs] which would be necessary to cause a 3 dBA increase in noise levels). However, the effect of ambient noise (i.e., noise from vehicular traffic) is addressed in the following section and an analysis is presented that determines the level of building attenuation necessary to ensure that the proposed project’s interior noise levels satisfy applicable interior noise criteria under City Environmental Quality Review (CEQR) requirements and the U.S. Department of Housing and Urban Development (HUD) noise abatement guidelines.

B. ACOUSTICAL FUNDAMENTALS

Sound is a fluctuation in air pressure. Sound pressure levels are measured in units called decibels (dB). The particular character of the sound that we hear (e.g., a whistle compared to a French horn) is determined by the speed, or frequency, at which the air pressure fluctuates, or oscillates. Frequency defines the oscillation of sound pressure in terms of cycles per second. One cycle per second is known as 1 Hertz (Hz). People can hear over a relatively limited range of sound frequencies, generally between 20 Hz and 20,000 Hz, and the human ear does not perceive all frequencies equally well. High frequencies (e.g., a whistle) are more easily discernable and therefore more intrusive than many of the lower frequencies (e.g., the lower notes on the French horn).

A-WEIGHTED SOUND LEVEL (DBA)

In order to establish a uniform noise measurement that simulates people’s perception of loudness and annoyance, the decibel measurement is weighted to account for those frequencies most audible to the human ear. This is known as the A-weighted sound level, or dBA, and it is the descriptor of noise levels most often used for community noise. As shown in **Table L-1**, the threshold of human hearing is defined as 0 dBA; very quiet conditions (e.g., a library) are approximately 40 dBA; normal daily activity levels are between 50 dBA and 70 dBA; noisy levels are above 70 dBA; and loud, intrusive, and deafening levels approach 130 dBA.

In considering these values, it is important to note that the dBA scale is logarithmic, meaning that each increase of 10 dBA describes a doubling of perceived loudness. Thus, the background noise in an office, at 50 dBA, is perceived as twice as loud as a library at 40 dBA. For most people to perceive an increase in noise, it must be at least 3 dBA. At 5 dBA, the change will be readily noticeable.

Table L-1
Common Noise Levels

Sound Source	(dBA)
Military jet, air raid siren	130
Amplified rock music	110
Jet takeoff at 500 meters	100
Freight train at 30 meters	95
Train horn at 30 meters	90
Heavy truck at 15 meters	80–90
Busy city street, loud shout	80
Busy traffic intersection	70–80
Highway traffic at 15 meters, train	70
Predominantly industrial area	60
Light car traffic at 15 meters, city or commercial areas, or residential areas close to industry	50–60
Background noise in an office	50
Suburban areas with medium-density transportation	40–50
Public library	40
Soft whisper at 5 meters	30
Threshold of hearing	0
Note: A 10 dBA increase in level appears to double the loudness, and a 10 dBA decrease halves the apparent loudness. Sources: Cowan, James P. <i>Handbook of Environmental Acoustics</i> , Van Nostrand Reinhold, New York, 1994. Egan, M. David, <i>Architectural Acoustics</i> . McGraw-Hill Book Company, 1988.	

SOUND LEVEL DESCRIPTORS

Because the sound pressure level unit of dBA describes a noise level at just one moment and very few noises are constant, other ways of describing noise that fluctuates over extended periods have been developed. One way is to describe the fluctuating sound heard over a specific time period as if it had been a steady, unchanging sound. For this condition, a descriptor called the equivalent sound level, L_{eq} , can be computed. L_{eq} is the constant sound level that, in a given situation and time period (e.g., 1 hour, denoted by $L_{eq(1)}$, or 24 hours, denoted by $L_{eq(24)}$), conveys the same sound energy as the actual time-varying sound. Statistical sound level descriptors such as L_1 , L_{10} , L_{50} , L_{90} , and L_x , are used to indicate noise levels that are exceeded 1, 10, 50, 90, and x percent of the time, respectively.

The relationship between L_{eq} and levels of exceedance is worth noting. Because L_{eq} is defined in energy rather than straight numerical terms, it is not simply related to the levels of exceedance. If the noise fluctuates very little, L_{eq} will approximate L_{50} or the median level. If the noise fluctuates broadly, the L_{eq} will be approximately equal to the L_{10} value. If extreme fluctuations are present, the L_{eq} will exceed L_{90} or the background level by 10 or more decibels. Thus the relationship between L_{eq} and the levels of exceedance will depend on the character of the noise. In community noise measurements, it has been observed that the L_{eq} is generally between L_{10} and L_{50} .

A descriptor for cumulative 24-hour sound levels is the day-night sound level, abbreviated as L_{dn} . This is a 24-hour measure that accounts for the moment-to-moment fluctuations in A-weighted noise levels due to all sound sources during 24 hours, combined. Mathematically, the L_{dn} noise level is the energy average of all $L_{eq(1)}$ noise levels over a 24-hour period, where nighttime noise levels (10 PM to 7 AM) are increased by 10 dBA before averaging.

For purposes of the proposed project, the L_{10} and L_{dn} descriptors have been selected as the noise descriptors to be used to satisfy applicable interior noise criteria. The 1-hour L_{10} is the noise descriptor

used in the *CEQR Technical Manual* noise exposure guidelines for City environmental impact review classification, and the L_{dn} is the noise descriptor used in the HUD attenuation requirements.

C. NOISE STANDARDS AND CRITERIA

NEW YORK CEQR NOISE CRITERIA

The *CEQR Technical Manual* sets external noise exposure standards; these standards are shown in **Table L-2**. Noise exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable.

Table L-2
Noise Exposure Guidelines For Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External Exposure	Airport ³ Exposure	Marginally Acceptable General External Exposure	Airport ³ Exposure	Marginally Unacceptable General External Exposure	Airport ³ Exposure	Clearly Unacceptable General External Exposure	Airport ³ Exposure
Outdoor area requiring serenity and quiet ²		$L_{10} \leq 55$ dBA	$L_{dn} \leq 60$ dBA	N/A	$60 < L_{dn} \leq 65$ dBA	N/A	$(i) 65 < L_{dn} \leq 70$ dBA, (ii) $70 \leq L_{dn}$	N/A	$L_{dn} \leq 75$ dBA
Hospital, nursing home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA		$65 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
Residence, residential hotel, or motel	7 AM to 10 PM	$L_{10} \leq 65$ dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	10 PM to 7 AM	$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, outpatient public health facility		Same as Residential Day (7 AM–11 PM)		Same as Residential Day (7 AM–11 PM)		Same as Residential Day (7 AM–11 PM)		Same as Residential Day (7 AM–11 PM)	
Commercial or office		Same as Residential Day (7 AM–11 PM)		Same as Residential Day (7 AM–11 PM)		Same as Residential Day (7 AM–11 PM)		Same as Residential Day (7 AM–11 PM)	
Industrial, public areas only ⁴	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes:

(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more; (ii) *CEQR Technical Manual* noise criteria for train noise are similar to the above aircraft noise standards: the noise category for train noise is found by taking the L_{dn} value for such train noise to be an L_{dn} (L_{dn} contour) value.

Table Notes:

¹ Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

² Tracts of land where serenity and quiet are extraordinarily important and serve an important public need, and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.

³ One may use FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

⁴ External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Source:

New York City Department of Environmental Protection (DEP) (adopted policy 1983).

Attachment L: Noise

The *CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise level (see **Table L-3**). Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower for residential or community facility uses and are determined based on exterior $L_{10(1)}$ noise levels.

Table L-3
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Noise Level With Proposed Action	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation ^A	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	$36 + (L_{10} - 80)^B$ dBA
Notes: ^A The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial uses would be 5 dBA less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation. ^B Required attenuation values increase by 1 dBA increments for L_{10} values greater than 80 dBA. Source: DEP					

HUD DEVELOPMENT GUIDELINES

The *HUD Noise Guidebook* sets exterior noise standards for housing construction projects based on Day-Night Sound Level (i.e., L_{dn}) values (see **Table L-4**). The L_{dn} refers to a 24-hour average noise level with a 10 dB penalty applied to the noise levels during the hours between 10 PM and 7 AM, due to increased sensitivity to noise levels during these hours. If the exterior noise level is 65 L_{dn} to 70 L_{dn} , 25 dBA of noise attenuation must be provided; if the exterior noise level is 70 L_{dn} to 75 L_{dn} , 30 dBA of noise attenuation is required; and if the exterior noise level exceeds 75 L_{dn} , sufficient attenuation must be provided to bring interior levels down to 45 L_{dn} or lower for residential uses.

Table L-4
HUD Exterior Noise Standards

	Acceptable	Normally Unacceptable	Unacceptable
Noise Level With Proposed Project	$L_{dn} \leq 65$	$65 < L_{dn} \leq 75$	$75 < L_{dn}$
Source: HUD			

For this analysis, L_{dn} levels were calculated using the following equation:

$$10 * \text{LOG}[\text{Energy sum of sound levels from 2 AM peak hours, 2 PM peak hours, 11 off-peak hours (represented by the midday hour), and 9 late-night hours (represented by hours between 10PM and 7AM), with 10dBA added during the late-night hours}] - 13.8$$

First, 10 dB is added to the A-weighted sound levels measured between the hours of 10 PM and 7 AM (i.e., nighttime). The L_{dn} sound level is then computed from the adjusted nighttime sound levels along with the unadjusted morning (2 hours), midday (11 hours), and evening (2 hours) values.

D. EXISTING NOISE LEVELS

Existing noise levels were measured for 20-minute periods at two locations during the AM (7:00 AM to 9:00 AM), midday (MD) (12:00 PM to 2:00 PM), and PM (4:00 PM to 6:00 PM) peak hours as well as a late night (LN) (10:00 PM to 12:00 AM) time period on November 15, 2017. Site 1 was located on East 92nd Street between First and York Avenues. Site 2 was located near the entrance of the proposed building approximately 100 feet north of East 92nd Street (see **Figure L-1**).

EQUIPMENT USED DURING NOISE MONITORING

Measurements were performed using a Brüel & Kjær Sound Level Meter (SLM) Type 2250 (S/N 2717693), a Brüel & Kjær ½-inch microphone Type 4189 (S/N 3022942), and a Brüel & Kjær Sound Level Calibrator Type 4231 (S/N 2688762). The Brüel & Kjær SLM is a Type 1 instrument according to ANSI Standard S1.4-1983 (R2006). The SLM has a laboratory calibration date within 1 year of the date of the measurements, as is standard practice. The microphone was mounted on a tripod at a height of approximately 5 feet above the ground and was mounted away from any large reflecting surfaces that could affect the sound level measurements. The SLM was calibrated before and after readings with a Brüel & Kjær Type 4231 Sound Level Calibrator using the appropriate adaptor. Measurements at the location were made on the A-scale (dBA). The data were digitally recorded by the SLM and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq} , L_1 , L_{10} , L_{50} , and L_{90} . A windscreen was used during all sound measurements except for calibration. All measurement procedures were based on the guidelines outlined in ANSI Standard S1.13-2005.

RESULTS

The measured existing noise levels at sites 1 and 2 are summarized in **Table L-5**.

Table L-5
Existing Noise Levels (in dBA)

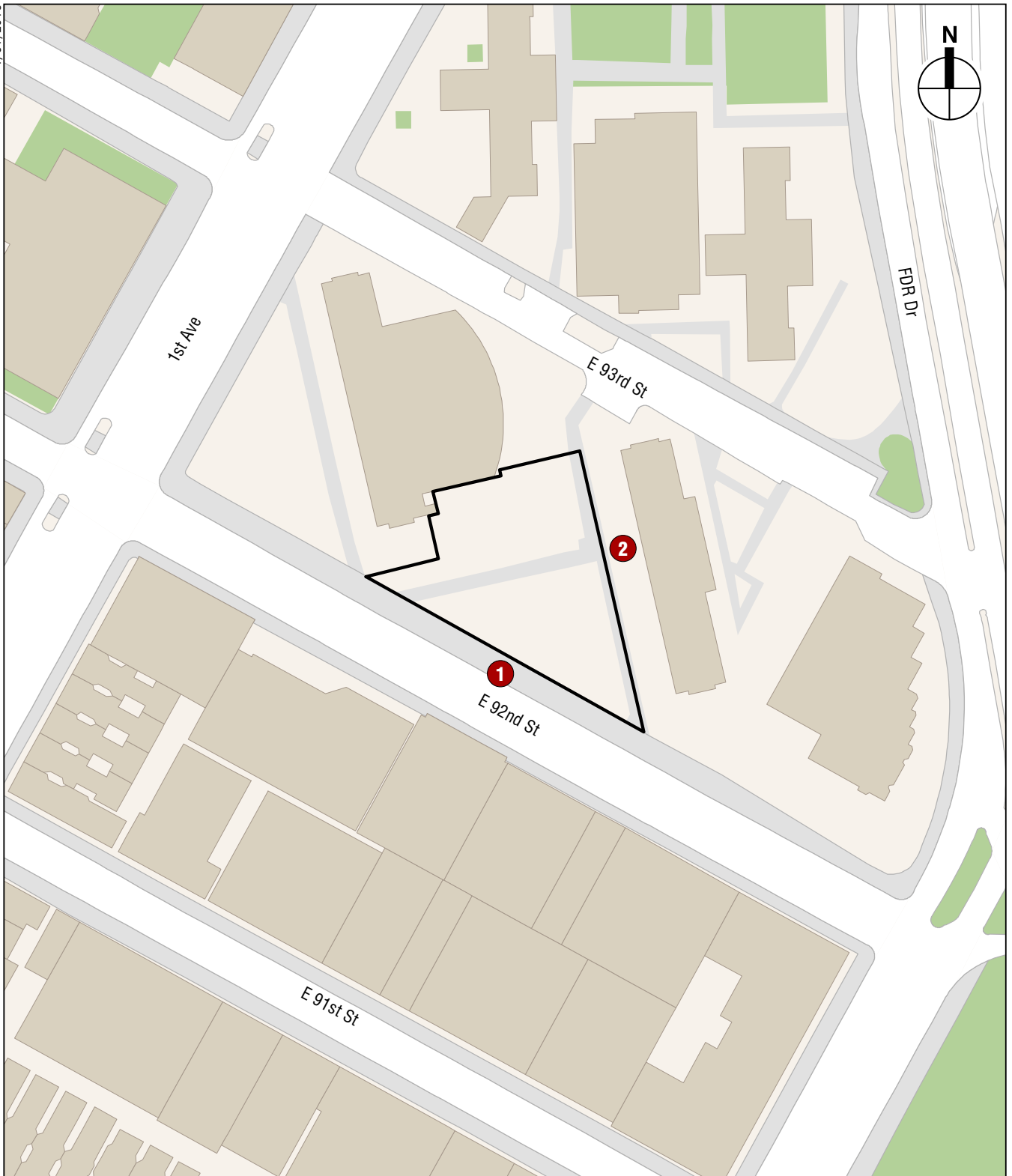
Site	Measurement Location	Time	L _{eq}	L ₁	L ₁₀	L ₅₀	L ₉₀	L _{dn}
1	East 92nd Street between First Avenue and York Avenue	AM	64.6	72.3	66.7	63.1	60.7	70.4
		MD	65.6	73.5	68.5	63.8	60.0	
		PM	69.6	78.5	71.2	65.2	59.9	
		LN	63.5	71.0	66.2	61.6	58.9	
2	Project Building Entrance north of East 92nd Street	AM	62.0	66.8	62.9	61.3	60.0	66.6
		MD	62.5	73.4	63.0	60.3	58.6	
		PM	62.9	73.6	64.4	59.5	57.4	
		LN	59.7	66.8	61.2	58.6	57.5	
Note: Field measurements were performed by AKRF, Inc. on November 15, 2017								

At sites 1 and 2, vehicular traffic on East 92nd Street was the dominant noise source. Measured levels are moderate and reflect the levels of vehicular traffic on adjacent streets. In terms of the CEQR criteria, the existing noise levels at site 2 are in the “acceptable” category, and the existing noise levels at site 1 are in the “marginally unacceptable” category. Additionally, in terms of the HUD criteria, the existing noise levels at all receptors would be considered “normally unacceptable.”

E. NOISE ATTENUATION MEASURES

As shown in **Table L-4**, the *CEQR Technical Manual* has set noise attenuation quantities for buildings based on exterior $L_{10(1)}$ noise levels in order to maintain interior noise levels of 45 dBA or lower for

1/31/2018



 Project Site

 Noise Monitoring Location

0 200 FEET

BELLWETHER AT YORKVILLE

Noise Monitoring Locations
Figure L-1

residential or community facility uses. The *HUD Noise Guidebook* recommends that buildings should provide sufficient window-wall attenuation to result in L_{dn} values of 45 dBA or less at dwelling units (DUs). The results of the building attenuation analysis are summarized in **Table L-6**.

Table L-6
CEQR and HUD Building Attenuation Requirements (in dBA)

Building Façade Location	Applicable Noise Receptor	CEQR		HUD	
		Maximum L_{10}	Required Attenuation ¹	Maximum L_{dn}	Required Attenuation ²
South (Along East 92nd Street)	1	71.2	28	70.4	30
All Other Façades	2	64.4	N/A	66.6	25
Notes: ¹ CEQR attenuation requirements are shown for residential and community facility uses; commercial, administrative/office uses would require 5 dBA less attenuation. ² HUD attenuation applies to DUs and other noise-sensitive uses such as community facilities.					

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Normally, a building façade consists of wall, glazing, and any vents or louvers associated with the building mechanical systems in various ratios of area. The proposed building would include acoustically rated windows and central air conditioning (a means of alternate ventilation). The proposed building's façades, including these elements, would be designed to provide a composite attenuation greater than or equal to those listed in above in **Table L-6**, along with an alternate means of ventilation all residential uses.

Based upon the $L_{10(1)}$ and L_{dn} values at the project site, the proposed project's design measures would be expected to provide sufficient attenuation to achieve the CEQR interior noise level requirements. The window-wall attenuation measures, including an alternate means of ventilation, would be required through the Development Agreement between the New York City Housing Authority (NYCHA) and the project sponsor.

F. MECHANICAL SYSTEM

The building mechanical systems (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Code) and therefore would avoid producing levels that would result in any significant increase in ambient noise levels.

*

A. INTRODUCTION

This attachment assesses the potential for construction impacts associated with the proposed project. As described in Attachment A, “Project Description and Screening Analyses,” the proposed actions would facilitate the development of a mixed-use residential and community facility building (the “proposed project”) at a site on the northern side of East 92nd Street between First and York Avenues in the Yorkville neighborhood of Manhattan.

Based on the anticipated construction schedule, the proposed project is anticipated to be constructed over a 30-month period, with completion of the proposed building by 2021. This attachment provides a discussion of the governmental coordination and oversight that governs construction, a conceptual construction schedule, activities likely to occur during construction, the types of equipment that are likely to be used, and anticipated construction logistics (e.g., site access points and potential staging area locations). Based on this information, the potential for significant adverse impacts during construction are analyzed, focusing on transportation, air quality, noise, and vibration, as well as consideration of other technical areas including land use and neighborhood character, socioeconomic conditions, community facilities and services, open space, historic and cultural resources, and hazardous materials, in accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*.

Construction of the proposed project—as is the case with most construction projects—would result in temporary disruptions in the surrounding area. However, the project sponsor has committed to implementing a variety of measures (e.g., noise control, air emissions control, Maintenance and Protection of Traffic [MPT] plans, etc.) during construction to minimize the effects of construction of the proposed project. With the implementation of these measures, construction of the proposed project would not result in significant adverse impacts.

B. GOVERNMENTAL COORDINATION AND OVERSIGHT

Construction oversight involves several City, state, and federal agencies. **Table M-1** lists the primary involved agencies and their areas of responsibility. For projects in New York City, primary construction oversight lies with New York City Department of Buildings (DOB), which oversees compliance with the New York City Building Code. The areas of oversight include installation and operation of equipment such as cranes, sidewalk bridges, safety netting, and scaffolding. In addition, DOB enforces safety regulations to protect workers and the general public during construction. The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code, reviews and approves any water and sewer connections as well as any Construction Health and Safety Plans (CHASPs) and Remedial Action Plans (RAPs), and provides regulatory oversight of environmental investigations and remediation. The New York City Fire Department (FDNY) has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials. The New York City

Department of Transportation (DOT)'s Office of Construction Mitigation and Coordination (OCMC) reviews and approves any traffic lane and sidewalk closures.

Table M-1
Summary of Primary Agency Construction Oversight

Agency	Areas of Responsibility
New York City	
Department of Buildings	Building Code, site safety, and public protection
Department of Environmental Protection	Noise Code, dewatering discharge, RAPs, CHASPs hazardous materials investigations, and remediation
Fire Department	Compliance with Fire Code, fuel tank installation
Department of Transportation	Lane and sidewalk closures
New York State	
Department of Labor	Asbestos Workers
Department of Environmental Conservation	Hazardous materials, fuel/chemical storage tanks
United States	
Environmental Protection Agency	Air emissions, noise, hazardous materials
Occupational Safety and Health Administration	Worker safety

At the state level, the New York State Department of Labor (NYSDOL) licenses asbestos workers. The New York State Department of Environmental Conservation (NYSDEC) regulates disposal of hazardous materials and construction and operation of bulk petroleum and chemical storage tanks. At the federal level, although the U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons for rodent control, much of its responsibility is delegated to the state and City levels. The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

C. CONSTRUCTION SCHEDULE

The anticipated construction schedule for the proposed project is presented in **Table M-2**. The proposed building would be constructed in a single phase with an anticipated construction period of approximately 30 months.

Table M-2
Anticipated Construction Schedule for the Proposed Project

Construction Task	Approximate Start Month	Approximate Finish Month	Approximate Duration (Months)
Excavation and Foundation ¹	Month 1	Month 7	7
Superstructure	Month 7	Month 18	11
Exteriors	Month 10	Month 24	14
Interiors and Finishing	Month 9	Month 30	21
Note: ¹ Noise intensive activities during this stage of construction such as the excavation of soils including rock removal and line drilling activities are each anticipated to take approximately 2-3 months for a total of 5 months. Source: Suffolk Construction Company, August 2018			

Construction of the proposed building would consist of the following primary construction stages, which may overlap at certain times: excavation and foundation; superstructure; exteriors; and

interiors and finishing. These construction stages are described in greater detail under “General Construction Stages.”

D. DESCRIPTION OF CONSTRUCTION ACTIVITIES

CONSTRUCTION PRACTICES

This section describes the construction practices that would be employed during construction of the proposed project, including hours of work, access, deliveries, and staging areas, public safety, and rodent control.

HOURS OF WORK

Construction of the proposed project would be carried out in following New York City laws and regulations, which allow construction activities between 7:00 AM and 6:00 PM on weekdays. Most workers would arrive between 6:00 AM and 7:00 AM. Construction work would normally end at 3:30 PM, but it can be expected that, in order to complete certain critical tasks (e.g., finishing a concrete pour for a floor deck), the workday may be extended beyond normal work hours. Any extended workdays would generally last until approximately 6:00 PM and would include only construction workers involved in the specific task requiring additional work time.

Weekend or night work may also be required for certain construction activities, such as the erection of the tower crane. Appropriate work permits from DOB would be obtained for any necessary work outside of normal construction hours and no work outside of normal construction hours would be performed until such permits are obtained. The numbers of workers and pieces of equipment in operation for weekend work would typically be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend or night work would be less than that of a normal workday.

ACCESS, DELIVERIES, AND STAGING AREAS

Access to the project site during construction would be controlled. The project sites would be fenced off, and limited access points for workers and construction-related trucks would be provided. Construction workers are prohibited from parking their vehicles on-site during the construction period. As is the case with most urban construction sites, material deliveries to the site would be regimented and scheduled. In addition, to minimize noise on the surrounding community including the adjacent John Haynes Holmes Towers development (the “Holmes Towers development”), a structure would be erected to house the concrete pump and concrete mixer trucks as they access the pump. Based on preliminary construction logistics, construction trucks such as dump trucks or concrete trucks are anticipated to access the project site along 92nd Street. The existing sidewalk and the parking lane on East 92nd Street would be temporarily closed to accommodate construction. However, there would be a pedestrian pathway on East 92nd Street adjacent to the sidewalk curb such that pedestrian circulation along the street would be maintained at all times during construction. Pedestrian circulation through this area would be protected by safety barriers, overhead protection and traffic flaggers at each site entrance. Pedestrian access to the existing Holmes Tower 2 to the east would be shifted closer to the building during construction with a temporary walkway and would also be covered by overhead protection. MPT plans would be developed to ensure the safety of pedestrian, bicyclist, and vehicle circulation near the project site during construction of the proposed project as required by DOT. Measures specified in the MPT plans that are anticipated to be implemented would include but not be limited to the

following: safety signs; safety barriers; and site perimeter barriers. Approval of these plans and implementation of the closures would be coordinated with DOT's OCMC.

PUBLIC SAFETY

A variety of measures would be employed to ensure public safety during the construction of the proposed project including, but not limited to, sidewalk bridges to provide overhead protection; safety signs to alert the public about active construction work; safety barriers, security cameras, and proper lighting to ensure the safety of the public passing by the project construction areas; flag persons to control trucks entering and exiting the project construction areas and/or to provide guidance for pedestrians and bicyclists safety; and safety nettings on the sides of the proposed building as the superstructure work advances upward to prevent debris from falling to the ground. All contractors would be required to attend preconstruction safety meetings and all DOB safety requirements would be followed and construction of the proposed project would be undertaken so as to ensure the safety of the community and the construction workers themselves.

RODENT CONTROL

Construction contracts may include provisions for a rodent control program. Before the start of construction, the contractor would survey and bait the appropriate areas and provide for proper site sanitation as appropriate. During construction, the contractor would carry out a maintenance program, as necessary. Measures that may be implemented during construction include baiting the project sites within fenced construction areas, providing covered trash receptacles that would be emptied daily, and trimming all vegetation regularly.

GENERAL CONSTRUCTION STAGES

Prior to the commencement of construction, the work area would be prepared for construction. Preparation of the work areas would include the installation of public safety measures such as fencing, netting, and signs. The construction areas would be cleared and worker and truck access points would be established. Portable toilets, construction trailers, and dumpsters for trash would be brought on site and installed.

After site preparation activities are complete, construction of the proposed building would proceed with the construction stages detailed below.

EXCAVATION

The proposed project would require excavation activities (to approximately 12 feet below grade) at the project site for the proposed building cellar and foundation. Excavation work would begin with the installation of temporary walls to contain soil around the excavation area and excavators would then be used to excavate soil including rock removal, which is anticipated to take approximately two months. The soil would be loaded onto dump trucks for transport to a licensed disposal facility or for reuse on any portion of the project sites that need fill. No blasting is anticipated for the construction of the proposed project. Excavation activities may also involve the use of drill rigs, generators, and/or compressors.

Dewatering

Water from rain and snow collected in the excavation area during construction would be removed using a dewatering pump. If groundwater dewatering is required, it would be performed in accordance with DEP sewer use requirements.

FOUNDATION

This stage of construction would include the construction of the foundation and below-grade elements of the proposed building. Piles would be installed with the use of drill rigs. Line drilling activities are anticipated to take approximately two months. Concrete trucks would be used to pour the foundation and the below-grade structures. Foundation activities may also involve the use of bar bending machines, concrete vibrators, and a crawler crane.

SUPERSTRUCTURE

The superstructure work would include the framework for the proposed building, such as beams, slabs, and columns. Construction of the interior structure—or core—of the building would include elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; and restroom areas. A tower crane would first be brought onto the project site during the superstructure task and would be used to lift structural components and other large materials. Superstructure activities may also include the use compressors, bar bending machine, and, and a variety of trucks. In addition, temporary construction elevators (hoists) would be used for the vertical movement of workers and materials during superstructure activities.

EXTERIORS

During this stage of construction, the exterior envelope systems of the proposed building would be installed. The exterior units would be transported via a hoist to the appropriate floors for installation. This stage of construction would overlap with a portion of the superstructure work.

INTERIORS AND FINISHING

Interiors and finishing activities would include the construction of interior partitions, installation of lighting fixtures, and interior finishes (e.g., flooring, painting, etc.), and mechanical and electrical work, such as the installation of elevators and lobby finishes. Final cleanup and touchup of the building and final building system (e.g., electrical system, fire alarm, plumbing, etc.) testing and inspections would be part of this stage of construction. Equipment used during interiors and finishing would include hoists, welders, and a variety of small handheld tools.

Interiors and finishing would typically be the quietest period of construction in terms of its effect on the public because most of the construction activities would occur inside the building with the façades substantially complete and the proposed building enclosed.

NUMBER OF CONSTRUCTION WORKERS AND MATERIAL DELIVERIES

The estimated number of construction worker and truck trips per quarter for the proposed project are summarized in **Table M-3**. As indicated in the table, the number of workers would peak in the fourth quarter of Year 2, with an estimated 296 workers and the number of trucks would peak in the first quarter of Year 1, with an estimated 27 trucks per day.

Table M-3
Number of Daily Construction
Workers and Trucks by Year and Quarter

	Year 1				Year 2				Year 3				Average	Peak
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th		
Workers	40	52	97	240	268	284	282	296	215	80	—	—	185	296
Trucks	27	15	15	20	22	22	25	20	15	5	—	—	19	27

E. ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

Construction of the proposed project—as is the case with any construction project—may result in some temporary disruptions in the surrounding area. The following analysis describes the overall temporary effects on transportation, air quality, noise and vibration, land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic and cultural resources, and hazardous materials.

TRANSPORTATION

The construction transportation analysis assesses the potential for construction activities to result in significant adverse impacts to traffic, parking conditions, and transit and pedestrian facilities. The analysis is based on the peak worker and truck trips during construction of the proposed project, which are developed based on several factors including worker modal splits, vehicle occupancy and trip distribution, truck passenger car equivalents (PCEs), and arrival/departure patterns. For the proposed project, the combined peak-construction, worker-vehicle and truck-trip generation would occur during superstructure and exteriors construction activities.

The following sections evaluate the potential for the proposed project’s peak construction worker and truck trips to result in significant adverse impacts to traffic, parking, transit facilities, and pedestrian facilities.

TRAFFIC

An evaluation of construction sequencing and worker/truck projections was undertaken to assess potential traffic impacts.

Construction Trip-Generation Projections

The average worker and truck trip projections discussed above in “Number of Construction and Materials Deliveries,” were further refined to account for worker modal splits and vehicle occupancy, arrival and departure distribution, and truck PCEs.

Daily Workforce and Truck Deliveries

For a reasonable worst-case analysis of potential transportation-related impacts during construction, the daily workforce and truck trip projections in the peak quarter were used as the basis for estimating peak-hour construction trips. It is expected that construction activities would generate the highest amount of daily traffic during the third quarter of Year 2, with a peak of approximately 282 workers and 25 truck deliveries per day. These estimates of construction activities are discussed further below.

Construction Worker Modal Splits and Vehicle Occupancy

Based on the latest available U.S. Census data (2000 Census data) for workers in the construction and excavation industry, it is anticipated that 51 percent of construction workers would commute to the project site by private autos at an average occupancy of approximately 1.43 persons per vehicle.

Peak-Hour, Construction-Worker Vehicle and Truck Trips

Similar to other construction projects in New York City, most of the construction activities at the development site are expected to take place from 7:00 AM to 3:30 PM. While construction truck trips would occur throughout the day (with more trips during the early morning), and most trucks would remain in the area for short durations, construction workers would commute during the hours before

and after the work shift. For analysis purposes, each truck delivery was assumed to result in two truck trips during the same hour (one “in” and one “out”), whereas each worker vehicle was assumed to arrive near the work shift start hour and depart near the work shift end hour. Further, in accordance with the *CEQR Technical Manual*, the traffic analysis assumed that each truck has a PCE of 2.

The estimated daily vehicle trips were distributed throughout the workday based on projected work shift allocations and conventional arrival/departure patterns for construction workers and trucks. For construction workers, the majority (approximately 80 percent) of the arrival and departure trips would take place during the hour before and after each work shift (6:00 to 7:00 AM for arrival and 3:00 to 4:00 PM for departure on a regular day shift). Construction truck deliveries typically peak during the hour before each shift (25 percent), overlapping with construction worker arrival traffic. As shown in **Table M-4**, based on these projections, the maximum construction-related traffic increments would be approximately 104 PCEs between 6:00 AM and 7:00 AM and 80 PCEs between 3:00 PM and 4:00 PM.

Table M-4
Peak Construction Vehicle Trip Projections

Hour	Auto Trips			Truck Trips			Total					
	Regular Shift			Regular Shift			Vehicle Trips			PCE Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
6 AM–7 AM	80	0	80	6	6	12	86	6	92	92	12	104
7 AM–8 AM	20	0	20	3	3	6	23	3	26	26	6	32
8 AM–9 AM	0	0	0	3	3	6	3	3	6	6	6	12
9 AM–10 AM	0	0	0	3	3	6	3	3	6	6	6	12
10 AM–11 AM	0	0	0	3	3	6	3	3	6	6	6	12
11 AM–12 PM	0	0	0	3	3	6	3	3	6	6	6	12
12 PM–1 PM	0	0	0	3	3	6	3	3	6	6	6	12
1 PM–2 PM	0	0	0	1	1	2	1	1	2	2	2	4
2 PM–3 PM	0	5	5	0	0	0	0	5	5	0	5	5
3 PM–4 PM	0	80	80	0	0	0	0	80	80	0	80	80
4 PM–5 PM	0	15	15	0	0	0	0	15	15	0	15	15
Daily Total	100	100	200	25	25	50	125	125	250	150	150	300
Note: Hourly construction worker and truck trips were derived from an estimated quarterly average number of construction workers and truck deliveries per day, with each truck delivery resulting in two daily trips (arrival and departure).												

Since the construction-related traffic increment of 104 PCEs between 6:00 AM and 7:00 AM exceeds the *CEQR Technical Manual's* 50 peak hour vehicle trip-ends threshold, a Level 2 screening assessment was conducted to determine the need for additional quantified traffic analyses. As shown in **Figures M-1 and M-2**, the construction generated vehicle trips were distributed to various roadways near the project site. Specifically, construction worker vehicle trips were distributed to off-street parking facilities (see **Table M-5** and **Figure M-3**) near the project site, including to garages along First and Second Avenues, East 93rd and East 94th Streets, East 92nd Street, East 91st Street, East 89th Street and York Avenue. Construction truck trips were assigned to the project site via New York City Department of Transportation (NYCDOT) designated truck routes. As shown in **Figure M-1** and **Figure M-2**, these incremental construction vehicle trips, including both construction worker vehicles and construction trucks, would not result in more than 50 vehicle-trips at any intersection, which is the *CEQR Technical Manual's* threshold for a detailed analysis). Therefore, the traffic increase due to construction activities for the proposed project would not result in significant adverse impacts.

7/20/2018



 Project Site

BELLWETHER AT YORKVILLE

Construction PCE Trips
Weekday AM Peak Hour (6 AM - 7 AM)
Figure M-1

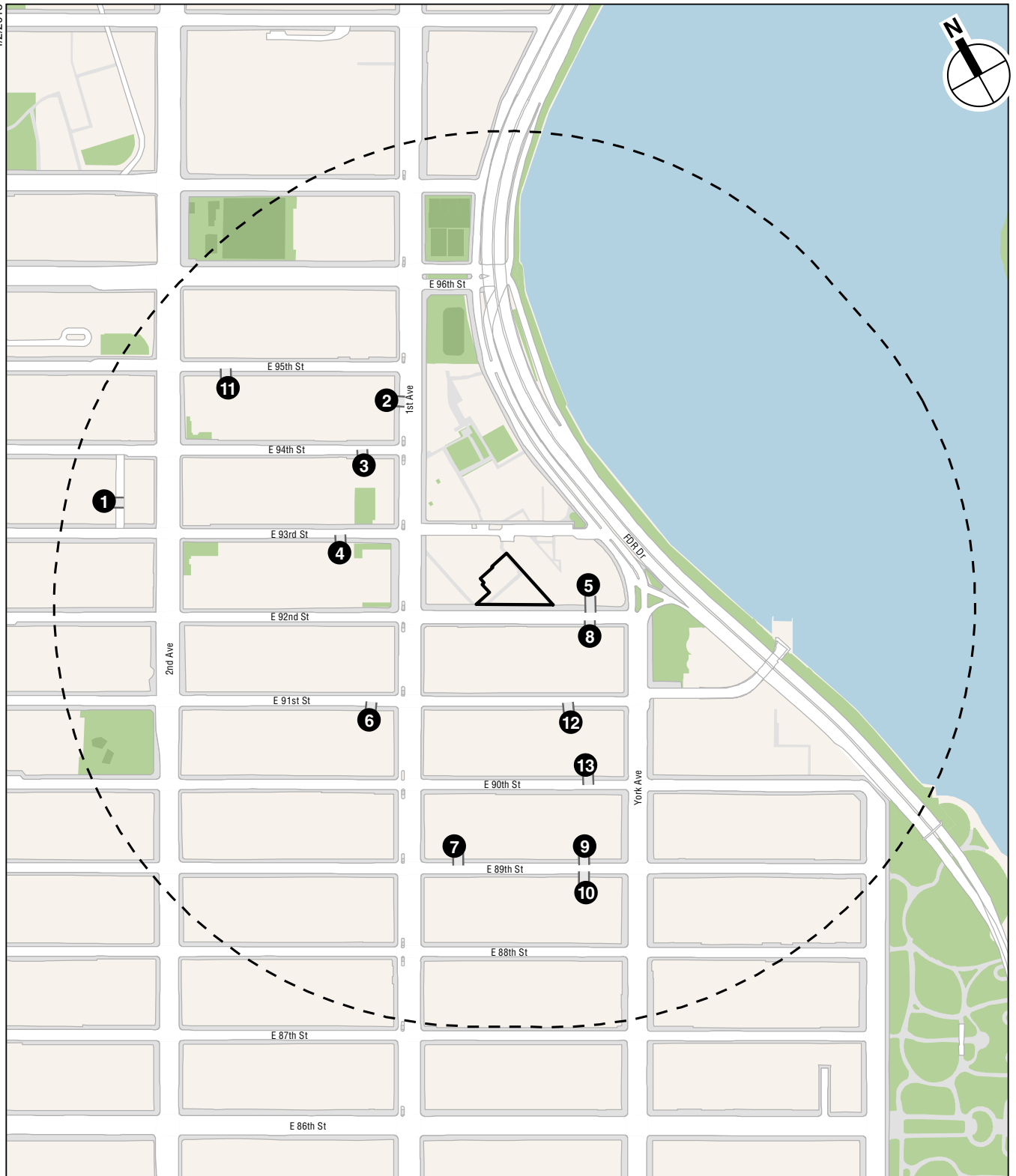
7/20/2018



Project Site

BELLWETHER AT YORKVILLE

Construction PCE Trips
Weekday PM Peak Hour (3 PM - 4 PM)
Figure M-2



- Project Site
- Study Area (Quarter-mile boundary)
- 1 Off-Street Parking Facility

0 500 FEET

Table M-5
Existing Off-Street Public Parking—1/4-Mile Study Area
Weekday Utilization

Map #	Name	Address	License Number	Licensed Capacity	Utilization Rate			Utilized Spaces			Available Spaces						
					AM	MD	PM	ON	AM	MD	PM	ON	AM	MD	PM	ON	
1	Astor Terrace Garage	245 E 93rd St	1026203	112	60%	90%	90%	40%	67	101	101	45	45	11	11	67	
2	Quik Park East 94th Street LLC	1829 1st Avenue	2027740	36	90%	90%	80%	80%	32	32	29	29	4	4	7	7	
3	Rapid Park	340 E 94th St	2050408	124	70%	70%	80%	80%	87	87	99	99	37	37	25	25	
4	MP 93 LLC	340 E 93rd St	1376929	146	40%	55%	65%	40%	58	80	95	58	88	66	51	88	
5	441 E 92nd St Garage	441 E 92nd St	1070436	137	50%	65%	65%	25%	69	89	89	34	68	48	48	103	
6	SP+ Parking	354 E 91st St	2033057	39	100%	100%	80%	80%	39	39	31	31	0	0	8	8	
7	Gracie Public Parking Corp.	401 E 89th St	901963	114	70%	90%	75%	60%	80	103	86	68	34	11	28	46	
8	River York Barclay LLC	479 E 90th St	1071281	130	45%	70%	75%	40%	59	91	98	52	71	39	32	78	
9	Icon Parking	1725 York Ave	1078653	104	60%	75%	70%	50%	62	78	73	52	42	26	31	52	
10	Glenwood Management	1675 York Ave	1250870	135	70%	85%	85%	70%	95	115	115	95	40	20	20	40	
11	94-95 Parking Corp	1832 2nd Ave	427239	180	55%	85%	75%	50%	99	153	135	90	81	27	45	90	
12	Elis Leasing Inc	422 E. 91st St	928927	135	66%	80%	50%	50%	89	108	68	68	46	27	67	67	
13	York & 90th Parking LLC	1735 York Ave	2037952	92	55%	65%	75%	60%	51	60	69	55	41	32	23	37	
Totals					1,484	60%	77%	73%	52%	887	1,136	1,088	776	597	348	396	708

Notes:

MD = Weekday Midday; ON = Weekday Overnight; N/A = Not Available

Sources:

Survey conducted by AKRF Inc. December 2017

PARKING

As described above, the peak number of workers would be 296 per day, and would occur during the third quarter of Year 2. Based on the latest available U.S. Census data (2000 Census data) for workers in the construction and excavation industry, it is anticipated that 51 percent of construction workers would commute to the project site by private autos at an average occupancy of approximately 1.43 persons per vehicle. The anticipated construction activities are therefore projected to generate a maximum parking demand of 106 parking spaces. Construction workers are expected to park in off-street spaces or nearby parking facilities and the peak demand of 106 parking spaces could be fully accommodated by the off-street spaces and parking facilities available within a ¼-mile radius of the project site. Therefore, the proposed project would not result in any significant adverse parking impacts during construction.

TRANSIT

Based on the latest available 2000 U.S. Census data for workers in the construction and excavation industry, it is anticipated that approximately 40 percent of workers would commute to the project site via transit. The study area is well served by public transportation, including the Q and R subway lines (86th and 96th Street stops), six bus routes (M15, M31, M86, M98, M101/M102, M103) and the East 90th Street Ferry Terminal. During the peak-construction worker shift (296 average daily construction workers in the 7:00 AM to 4:00 PM shift), approximately 118 workers would travel by transit. With 80 percent of these workers arriving or departing during the construction peak hours, the estimated number of peak-hour transit trips would be 95, well below the *CEQR Technical Manual* 200-transit-trip analysis threshold. Therefore, construction of the proposed project would not result in any significant adverse construction transit impacts, and no further analysis is required.

PEDESTRIANS

As summarized above, 296 average daily construction workers are projected in the 7:00 AM to 4:00 PM shift during peak construction. With 80 percent of these workers arriving or departing during the construction peak hours (6:00 AM to 7:00 AM and 3:00 PM to 4:00 PM), the corresponding numbers of peak-hour pedestrian trips traversing the area's sidewalks, corners, and crosswalks would be approximately 237. The construction pedestrian increments are expected to be dispersed to pedestrian elements surrounding the project site, such that no single pedestrian element is likely to incur construction-related pedestrian trips that would exceed the *CEQR Technical Manual* analysis threshold of 200 pedestrian trips. Furthermore, because these peak construction pedestrian increments would take place during hours when background pedestrian levels are substantially lower than the 8:00 to 9:00 AM and 5:00 to 6:00 PM commuter peak hours, there would not be a potential for significant adverse pedestrian impacts attributable to the projected construction worker pedestrian trips. Therefore, construction of the proposed project would not result in any significant adverse pedestrian impacts, and no further analysis is required.

AIR QUALITY

The construction of the proposed project requires the use of both non-road construction equipment and on-road vehicles. Non-road construction equipment includes equipment operating on-site such as excavators, cranes, and generators. On-road vehicles include construction trucks and construction worker vehicles arriving to and departing from the project site as well as operating on-site. Emissions from non-road construction equipment and on-road vehicles have the potential to affect air quality.

In addition, emissions from dust-generating construction activities (i.e., truck loading and unloading operations) also have the potential to affect air quality. The *CEQR Technical Manual* lists several factors for consideration in determining whether a quantified on-site and/or off-site construction impact assessment for air quality is appropriate. These factors include the use of emission control measures, the duration and intensity of construction activities, the location of nearby sensitive receptors, and project-generated, construction-related vehicle trips.

EMISSION CONTROL MEASURES

Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. These include the use of clean fuel, diesel equipment reduction, dust suppression measures, and idling restrictions:

- *Clean Fuel.* Ultra-low-sulfur diesel (ULSD) fuel would be used exclusively for all diesel engines throughout the construction site.
- *Diesel Equipment Reduction.* As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, and table saws (i.e., early electrification) to the extent feasible and practicable.
- *Dust Control Measures.* To minimize dust emissions from construction activities, a dust control plan, including a watering program, would be required as part of contract specifications. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the project site; water sprays would be used for all excavation activities and transfer of soils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air. All measures required by the portion of DEP's *Construction Dust Rules* regulating construction-related dust emissions would be implemented.
- *Idling Restriction.* As required by local law, all stationary vehicles on roadways adjacent to the project site would be prohibited from idling for more than 3 minutes. The idling restriction excludes vehicles that are using their engines to operate a loading, unloading, or processing device (e.g., concrete-mixing trucks) or otherwise required for the proper operation of the engine.

In addition, the following measures would be implemented to the extent practicable to further reduce air pollutant emissions during construction:

- *Best Available Tailpipe Reduction Technologies.* Non-road diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the proposed project), including but not limited to, concrete mixing and pumping trucks would utilize the best available technology (BAT) (currently diesel particulate filters) for reducing diesel particulate matter emissions.
- *Utilization of Newer Equipment.* EPA's Tier 1 through 4 standards for non-road engines regulate the emission of criteria pollutants from new engines, including PM, CO, NO_x, and hydrocarbons (HC). Efforts would be made throughout construction to utilize non-road construction equipment and engines meeting at least the Tier 3 emissions standards.

Overall, this emissions control program is expected to substantially reduce air pollutant emissions during construction of the proposed project.

DURATION AND INTENSITY OF CONSTRUCTION ACTIVITIES

Construction of the proposed project, as is the case with any construction project, would result in temporary disruption to the surrounding area. The overall construction duration of the proposed

project is anticipated to be completed over a period of approximately 30 months. However, the most intense construction activities in terms of air pollutant emissions (demolition, excavation, and foundation activities where the largest number of large non-road diesel engines such as drill rigs, excavators, and loaders would be employed) are anticipated to occur over a period of approximately 7 months. Construction sources would move around the project site over the construction period such that the air pollutant concentration increments due to construction of the proposed project would not persist in any single location. The other stages of construction, including superstructure, exteriors, and interiors and finishing would result in substantially lower air emissions since they would require fewer pieces of heavy-duty diesel equipment and would not involve soil disturbance activities that generate dust emissions. In addition, interior construction work would generally occur within an enclosed building, thereby shielding nearby sensitive receptors.

The approach and procedures for constructing the proposed building would be typical of the methods utilized in other building construction projects throughout New York City and therefore would not be considered out of the ordinary in terms of intensity. The air pollutant emission levels associated with construction of the proposed project are typical of ground-up building construction in New York City that would require excavation and foundation construction (where large equipment such as drill rigs, excavators, and loaders would be employed). Overall, emissions associated with the construction of the proposed project would likely be lower than a typical project due to the emission control measures to be implemented during construction (see “Emission Control Measures”).

LOCATION OF NEARBY SENSITIVE RECEPTORS

The area near the project site contains predominantly residential and commercial uses, and a mix of community facility, manufacturing, and open space uses. Although there are sensitive receptor locations near the project site, in particular the adjacent Holmes Tower development, measures would be taken to reduce pollutant emissions during construction as discussed under “Emission Control Measures”. For example, a watering program would be implemented to minimize dust emissions from construction activities and all measures required by the portion of DEP’s *Construction Dust Rules* regulating construction-related dust emissions would be strictly followed. In addition, to further minimize air pollutant emissions during construction, emissions reduction measures including the use of BAT and the use of newer and cleaner equipment would be implemented during construction. Furthermore, the construction areas would be fenced off, which would serve as a buffer between the emission sources and nearby sensitive receptor locations. As described above under “Duration and Intensity of Construction Activities,” sources would move throughout the project site over the construction period such that the air pollutant concentration increments due to construction of the proposed project would not persist in any single location and no portion of the adjacent sensitive receptors would be subject to the full effects of construction for the entire construction period. In addition, the approach and procedures for constructing the proposed buildings would be typical of the methods utilized in other building construction projects throughout New York City and therefore would not be considered out of the ordinary in terms of intensity. Therefore, given the emission control measures and movement of equipment throughout the site, potential concentration increments from on-site construction sources at nearby sensitive receptor locations would not rise to the level of a significant adverse impact.

ON-ROAD SOURCES

Construction worker commuting trips and construction truck deliveries would generally occur during off-peak hours. In addition, when distributed over the transportation network, the construction trip increments would not concentrate at any single location. Construction-generated

traffic increments from the proposed project would also not exceed the *CEQR Technical Manual* CO screening threshold of 170 peak-hour trips at intersections in the area, or the fine particulate matter (PM_{2.5}) emissions screening thresholds discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, further mobile source analysis is not required.

CONCLUSION

Based on the analyses provided and implementation of the emissions reduction program described above, construction of the proposed project would not result in any significant adverse construction air quality impacts, and no further analysis is required.

NOISE

Potential impacts on community noise levels during construction of the proposed project could result from noise due to construction equipment operation and from noise due to construction trucks and worker vehicles traveling to and from the project site. Noise and vibration levels at a given location are dependent on the type and number of pieces of construction equipment being operated, the acoustical utilization factor of the equipment (i.e., the percentage of time a piece of equipment is operating at full power), the distance from the construction site, and any shielding effects (from structures such as buildings, walls, or barriers). Noise levels caused by construction activities would vary widely, depending on the stage of construction and the location of the construction relative to receptor locations as described below. The most noise-intensive construction activities would not occur every day throughout the months that they occur and would not occur during every hour on days that they occur. During hours when the loudest pieces of construction equipment are not in use, receptors would experience lower construction noise levels. Construction noise levels would fluctuate during the construction period at each receptor, with the greatest levels of construction noise occurring for limited periods during construction. The most substantial construction noise sources are expected to be impact equipment such as excavators with hydraulic break rams and paving breakers, as well as the movements of trucks.

Construction noise is regulated by the requirements of the New York City Noise Control Code (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) and the DEP Notice of Adoption of Rules for Citywide Construction Noise Mitigation (also known as Chapter 28). These requirements mandate that specific construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. As described above, for weekend and after hour work, permits would be required, as specified in the New York City Noise Control Code. As required under the New York City Noise Control Code, a site-specific noise mitigation plan for the proposed project would be developed and implemented that may include source and path controls.

CONSTRUCTION NOISE ANALYSIS FUNDAMENTALS

Construction activities result in increased noise levels as a result of (1) the operation of construction equipment on-site; and (2) the movement of construction-related vehicles (i.e., worker automobiles, and material and equipment deliveries) on the roadways to and from the construction site. The effect of each of these noise sources was evaluated.

Noise from the on-site operation of construction equipment at a specific receptor location near a construction site is generally calculated by computing the sum of the noise produced by all pieces

of equipment operating at the construction site. For each piece of equipment, the noise level at a receptor location is a function of the following:

- The noise emission level of the equipment (see **Table M-6** for the noise levels for typical construction equipment);
- A usage factor, which accounts for the percentage of time the equipment is operating at full power;
- The distance between the piece of equipment and the receptor;
- Topography and ground effects; and
- Shielding.

Similarly, noise levels due to construction-related traffic are a function of the following:

- The noise emission levels of the type of vehicle (e.g., auto, light-duty truck, heavy-duty truck, bus, etc.);
- Volume of vehicular traffic on each roadway segment;
- Vehicular speed;
- The distance between the roadway and the receptor;
- Topography and ground effects; and
- Shielding.

Table M-6
Typical Construction Equipment Noise Emission Levels (dBA)

Equipment List	Typical L _{max} Noise Level at 50 feet ¹	Project-Specific L _{max} Noise Level at 50 feet ²
Auger Drill Rig	85	
Backhoe/Loader	80	
Compressor	80	70
Concrete Pump	82	
Concrete Trowel	67 ³	
Concrete Vibrator	80	
Cranes	85	75
Dozer	85	
Excavator	85	
Forklift	85	
Generators	82	72
Circular Saw	59	
Hoist	75 ⁴	
Man Lift	85	
Pump	77	67
Rebar Bender	80	
Saw	76 ⁵	
Welding Machines	73	

Notes:

¹ Based on Citywide Construction Noise Mitigation, Chapter 28, DEP, 2007.

² Based on use of path controls, including portable noise barriers, enclosures, acoustical panels, and/or curtains, whichever are feasible and practical.

³ Based on noise certifications for Columbia Manhattanville construction project.

⁴ Based on "Noise Control for Construction Equipment and Construction Sites" for Hydro Quebec, 1985.

⁵ Based on FTA Manual.

CONSTRUCTION NOISE IMPACT CRITERIA

Chapter 22 of the *CEQR Technical Manual* breaks construction duration into “short-term” and “long-term” and states that construction noise is not likely to require analysis unless it “affects a sensitive receptor over a long period of time.” Consequently, the construction noise analysis considers the potential for construction of a project to create high noise levels (the “intensity”), whether construction noise would occur for an extended period of time (the “duration”), and the locations where construction has the potential to produce noise (“receptors”) in evaluating potential construction noise effects.

The noise impact criteria described in Chapter 19, Section 410 of the *CEQR Technical Manual* serve as a screening-level threshold for potential construction noise impacts. If construction of the proposed project would not result in any exceedances of these criteria at a given receptor, then that receptor would not have the potential to experience a construction noise impact. However, if construction of the proposed project would result in exceedances of these noise impact criteria, then further consideration of the intensity and duration of construction noise is warranted at that receptor. The screening level noise impact criteria for mobile and on-site construction activities are as follows:

- If the No Action noise level is less than 60 dBA $L_{eq(1)}$, a 5 dBA $L_{eq(1)}$ or greater increase would require further consideration.
- If the No Action noise level is between 60 dBA $L_{eq(1)}$ and 62 dBA $L_{eq(1)}$, a resultant $L_{eq(1)}$ of 65 dBA or greater would require further consideration.
- If the No Action noise level is equal to or greater than 62 dBA $L_{eq(1)}$, or if the analysis period is a nighttime period (defined in the CEQR criteria as being between 10PM and 7AM), the threshold requiring further consideration would be a 3 dBA $L_{eq(1)}$ or greater increase.

CONSTRUCTION NOISE ANALYSIS METHODOLOGY

The construction noise analysis consists of the following:

- Identification of sensitive noise receptor locations¹ near and on the project site.
- Identification of noise reduction measures that would be employed during construction of the proposed project.
- Consideration of potential noise impacts from mobile sources.
- Analysis of potential noise impacts from operation of construction equipment at the project site over the course of the construction of the proposed project. Consistent with the noise impact criteria discussed above, the analysis looks first at the intensity of noise levels during construction, then assesses the potential duration of those noise levels, and finally makes a determination of the potential for impact.
 - Intensity of construction noise is assessed based on the assumption that with the construction noise control measures described above, maximum $L_{eq(1)}$ noise levels at a reference distance of approximately 50 feet from the construction site boundary would be approximately in the low to mid 70s dBA during pile installation activities (given that the project would use drilled piles, resulting in noise levels 10 dBA less than impact pile installation); mid 70s dBA during non-pile installation excavation, foundation, or concrete

¹ A sensitive receptor location is an area where human activity may be adversely affected by elevated noise levels, including residences, parks, churches, etc.

work; and low 70s dBA during façade installation or interior fit-out.² The reference noise levels at 50 feet are then projected to the actual distances of the surrounding receptor areas from the construction site boundary.

- Duration of construction noise is assessed based on the construction schedule (see **Table M-2**).

NOISE RECEPTOR LOCATIONS

The project site is within the NYCHA Holmes Towers Development with existing residential buildings to the east and west (Holmes Tower 1 and 2), East 92nd Street to the south, and the NYCHA Stanley M. Isaacs Houses development to the northeast and northwest. The area surrounding the project site is a mix of predominantly residential and commercial uses, with some open space uses.

The noise receptors closest to the proposed construction activities are listed in **Table M-7**. The receptor areas and their distances from the proposed construction site are shown in **Appendix C**.

Table M-7
Construction Noise Receptor Areas

Receptor(s)	Land Use(s)	Approximate Distance and Direction from the Proposed Construction Work Area
Isaacs Houses 3; Residences on east side of First Avenue at 1801 First Avenue; 24-story building	Residential	210 feet north of Construction Work Area
Isaacs Houses 1; Residences on east side of First Avenue at 1801 First Avenue; 24-story building	Residential	145 feet north of Construction Work Area
Plymouth Tower; Residences at First Avenue between East 92nd and East 93rd Street; 31-story building	Residential	280 feet west of Construction Work Area
Holmes Towers 1; Residences on east side of First Avenue between East 92nd and East 93rd Street; 25-story building	Residential	30 feet west of Construction Work Area
Holmes Towers 2; Residences on east side of First Avenue between East 92nd and East 93rd Street; 25-story building	Residential	45 feet east of Construction Work Area
Brittany Apartments; Residences on north side of East 92nd Street at 1765-1775 York Avenue; 36-story building	Residential	95 feet east of Construction Work Area
Residences on west side of First Avenue between East 91st and East 92nd Street	Commercial / Residential	280 feet southwest of Construction Work Area
RiverEast; Residences on east side of First Avenue between East 91st and East 92nd Street; 32-story building	Residential	100 feet southwest of Construction Work Area
Residences on east side of First Avenue between East 91st and East 92nd Street	Commercial / Residential	220 feet southwest of Construction Work Area
The East River Hotel; Residences on south side of East 92nd Street between First Avenue and York Avenue; 15-story building	Residential	50 feet south of Construction Work Area
Residences on north side of East 91st Street between First Avenue and York Avenue	Residential	250 feet south of Construction Work Area
Barclay Apartments; Residences on west side of York Avenue between 91st and 92nd Street; 38-story building	Residential	120 feet southeast of Construction Work Area
Asphalt Green Upper East Side Campus at York Avenue and East 91st Street	Open Space	270 feet southeast of Construction Work Area

² Based on detailed noise analyses prepared for several large-scale construction projects with comparable noise-control measure commitments, including East New York Rezoning (CEQR No. 15DC102K) and Halletts Point Rezoning (CEQR No. 09DCP084Q).

NOISE MEASUREMENT RESULTS

Equipment Used During Noise Survey

Measurements were performed using Brüel & Kjær Sound Level Meters (SLM) Type 2250 and Type 2270, Brüel & Kjær ½-inch microphones Type 4189, and a Brüel & Kjær Sound Level Calibrator Type 4231. The Brüel & Kjær SLMs are Type 1 instruments according to ANSI Standard S1.4-1983 (R2006). The SLMs have laboratory calibration dates within one year of the date of the measurements, as is standard practice. The microphones were mounted at a height of approximately 5 to 6 feet above the ground, away from any large reflecting surfaces that could affect the sound level measurements. The SLMs were calibrated before and after readings with a Brüel & Kjær Type 4231 Sound Level Calibrator using the appropriate adaptor. Measurements at the location were made on the A-scale (dBA). The data were digitally recorded by the SLM and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq} , L_1 , L_{10} , L_{50} , and L_{90} . A windscreen was used during all sound measurements except for calibration. All measurement procedures were based on the guidelines outlined in ANSI Standard S1.13-2005.

Noise Survey Results

Noise levels during the AM analysis hour (i.e., 7:00 AM to 9:00 AM) were measured at each of four noise survey locations to determine baseline noise levels at receptors in the vicinity of the proposed construction work area. The baseline noise levels at each of the noise survey locations are shown in **Table M-8**. Full noise survey results are shown in **Appendix C**. At all noise measurement locations, the dominant existing noise source was vehicular traffic on the adjacent roadways.

Table M-8
Noise Survey Results in dBA

Site	Measurement Location ¹	L_{eq}
1	East 92nd Street between First Avenue and York Avenue ²	64.6
2	Project Building Entrance north of East 92nd Street ²	62.0
3	First Avenue between East 91st Street and East 92nd Street	70.4
4	York Avenue between East 91st Street and East 92nd Street	68.4
Notes:		
¹ Field measurements were performed by AKRF, Inc. on November 15, 2017 and April 12, 2018.		
² Field measurements are the same as the existing survey locations shown in Table L-5 in Attachment L, "Noise"		

In terms of CEQR noise exposure guidelines (shown in Table L-2 in Attachment L, "Noise"), during the morning analysis hour, existing noise levels at sites 1 and 2 listed in Table M-7 are in the "clearly acceptable" category, and existing noise levels at sites 3 and 4 are in the "marginally unacceptable" category.

NOISE REDUCTION MEASURES

Construction of the proposed project would be required to follow the requirements of the New York City Noise Control Code (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) for construction noise control measures. Additionally, the project sponsor has committed to additional noise control measures beyond the minimum required by code in order to reduce potential noise effects on the surrounding receptors. Specific noise control measures would be incorporated in noise mitigation plan(s) required under the New York City Noise Code as is called for in Chapter 22, "Construction," of the *CEQR Technical Manual*. These measures would include a variety of source and path controls.

In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented:

- Equipment that meets the sound level standards specified in Subchapter 5 of the New York City Noise Control Code and Table 22-1 of the *CEQR Technical Manual* would be utilized from the start of construction. **Table M-6** shows the noise levels for typical construction equipment and the mandated noise levels lower than the sound level standards for the equipment that would be used for construction of the proposed project;
- Pile installation would be conducted by means of the quieter drilling method rather than impact driving (drill pile installation would typically result in noise levels 10 dBA less than impact pile installation);
- As early in the construction period as logistics would allow (likely by the start of the superstructure stage of construction pending service provisions from Con Edison), diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable;
- Where feasible and practicable, the construction site would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than 3 minutes at the construction site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the New York City Administrative Code; and
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented to the extent feasible and practicable:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations;
- During superstructure operations, concrete operations (i.e., concrete trucks pouring into a concrete pump and concrete truck wash-out) would be enclosed and shielded from the residential buildings immediately adjacent to the west and east, either by staging these activities inside the footprint of the proposed tower after the ground floor is constructed and enclosed or by constructing enclosed sheds that are closed on three sides and to the top, and open only towards East 92nd Street;
- The construction hoist would be located along the East 92nd Street frontage of the project site, shielding it from the residential buildings immediately adjacent to the west and east;
- Noise barriers constructed from plywood or other materials surrounding the construction site would be utilized to provide shielding. The barriers would be at least 12 feet tall, including a 2-foot cantilever towards the construction work area. Where logistics allow, truck deliveries would take place behind these barriers; and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) would be required for certain dominant noise equipment to the extent feasible and practical (i.e., generators, compressors, and pumps). These barriers were assumed based on guidance from DEP's Rules for Citywide Construction Noise Mitigation to offer a 10 dBA reduction in noise levels for each piece of equipment to which they are applied, as shown in **Table M-6**. The details to construct portable noise barriers, enclosures, tents, etc.

are also shown in DEP's Rules for Citywide Construction Noise Mitigation. A structure enclosed on three sides and with a roof would be constructed to house concrete mixer trucks during operations and as they are washed out before leaving the site.

MOBILE SOURCE CONSTRUCTION NOISE ANALYSIS

Throughout the construction period, vehicles (construction-related trucks and worker vehicles) would travel near the project site. Most of these vehicles are expected to use First Avenue and Second Avenue, which are already heavily trafficked roadways. As described above, the amount of traffic generated by the construction of the proposed building would be low compared with existing traffic volumes on major feeder streets in the neighborhood. Additionally, the construction-related vehicles would be distributed amongst the different routes to and from the project site. Accordingly, construction-generated traffic on roadways to and from the project site would not have the potential to result in significant adverse construction noise impacts at locations away from the construction work area (i.e., at locations other than the areas specified above as receptors).

ON-SITE CONSTRUCTION NOISE ANALYSIS

As discussed above, the on-site construction noise analysis looks at the intensity of noise levels during construction, assesses the potential duration of those noise levels, and then makes a determination of the potential for impact.

Overview of Construction Activities

The overall construction period of the proposed project is anticipated to be approximately 30 months. The noisiest construction activities (the periods of excavation and foundation work including rock removal and line drilling) are anticipated to occur for approximately 5 months. Superstructure and exteriors work, which would be expected to last approximately 18 months, would require less heavy construction equipment as compared to the excavation and foundation work; construction equipment with higher noise levels such as pile drilling rigs, excavators, etc. would not be used during the superstructure, exteriors, and interiors and finishing stages of construction.

Intensity of Construction Noise from On-Site Sources

As described above, noise levels resulting from each type of construction activity were projected at receptors throughout the study area based on distance and shielding provided by existing buildings or project elements already constructed. Receptors further from the construction work area than those identified in **Table M-7** would experience construction noise levels no higher than the low to mid-60s dBA, which is considered "acceptable" according to *CEQR Technical Manual* noise evaluation criteria, and lower than measured existing noise levels throughout much of the study area. Consequently, receptors outside of these distances would not have the potential to experience significant adverse construction noise impacts. Noise receptors closer to the construction sites are discussed further below.

The projected maximum noise levels during construction at each façade of the receptors described above are summarized in **Table M-9**. The construction noise estimates for the full construction period are shown in **Appendix C**.

Table M-9
Estimated Construction Noise Summary (in dBA)

Receptor Area	Existing		Worst-Case With Action Construction Noise Levels		
	Leq	L10	Leq	Increase	L10
Isaacs Houses 3	70.3	73.9	71.5	1.2	75.1
Isaacs Houses 1	64.3	63.1	65.4	1.1	64.2
Plymouth Tower	70.3	73.9	71.0	0.7	74.6
Holmes Towers 1	61.7	59.5	77.5	15.8	80.5
Holmes Towers 2	61.7	59.5	72.0	10.3	75.0
Brittany Apartments	67.2	69.8	68.4	1.2	71.0
Azure and 1771-1779 First Avenue	70.3	73.9	70.4	0.1	74.0
RiverEast	70.3	73.9	71.2	0.9	74.8
1756-1764 First Avenue	70.3	73.9	70.4	0.1	74.0
The East River Hotel	64.3	63.1	70.9	6.6	73.9
407-419 East 91st Street	64.3	63.1	64.7	0.4	63.5
Barclay Apartments	67.2	69.8	69.4	2.2	72.0
Asphalt Green Upper East Side Campus	67.2	69.8	67.7	0.5	70.3

Isaacs Houses 3

As shown in **Table M-9**, the residences at Isaacs Houses 3 would experience moderate levels of construction noise and modest increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

Isaacs Houses 1

As shown in **Table M-9**, the residences at Isaacs Houses I would experience minimal levels of construction noise and negligible increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

Plymouth Tower

As shown in **Table M-9**, the residences at Plymouth Tower would experience minimal levels of construction noise and negligible increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

Holmes Towers 1

As shown in **Table M-9**, the residences at Holmes Towers 1 would experience high levels of construction noise and readily noticeable increases in noise level at times during the most noise-intensive construction activities on the construction work area. With the construction noise control measures described above, maximum $L_{eq(1)}$ noise levels at this receptor resulting from construction

would be in approximately the mid to high 70s dBA at the façade. Consequently, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds at times during the construction period. This receptor is discussed further under “Duration of Construction Noise from On-Site Sources.”

Holmes Towers 2

As shown in **Table M-9**, the residences at Holmes Towers 2 would experience high levels of construction noise and readily noticeable increases in noise level at times during the most noise-intensive construction activities on the construction work area. With the construction noise control measures described above, maximum $L_{eq(1)}$ noise levels at this receptor resulting from construction would be in approximately the mid 70s dBA at the façade. Consequently, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds at times during the construction period. This receptor is discussed further under “Duration of Construction Noise from On-Site Sources.”

Brittany Apartments

As shown in **Table M-9**, the residences at Brittany Apartments would experience minimal levels of construction noise and modest increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

Azure and 1771-1779 First Avenue

As shown in **Table M-9**, the residences along First Avenue between East 91st and East 92nd Street would experience minimal levels of construction noise and negligible increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

RiverEast

As shown in **Table M-9**, the residences at the RiverEast residential building on First Avenue would experience moderate levels of construction noise and modest increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, maximum $L_{eq(1)}$ noise levels at these residences resulting from construction would be in approximately the low 70s dBA at the façade. Consequently, the maximum noise levels predicted to be generated by on-site construction activities at these receptors would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds at times during the construction period. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

1756-1764 First Avenue

As shown in **Table M-9**, the residences at 1756-1764 First Avenue would experience minimal levels of construction noise and negligible increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this

receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

The East River Hotel

As shown in **Table M-9**, the residences at the East River Hotel would experience high levels of construction noise and readily noticeable increases in noise level at times during the most noise-intensive construction activities on the construction work area. With the construction noise control measures described above, maximum $L_{eq(1)}$ noise levels at these residences resulting from construction would be in approximately the low 70s dBA at the façade. Consequently, the maximum noise levels predicted to be generated by on-site construction activities at these receptors would be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds at times during the construction period. These receptors are discussed further under “Duration of Construction Noise from On-Site Sources.”

407-419 East 91st Street

As shown in **Table M-9**, the residences at 407-419 East 91st Street would experience minimal levels of construction noise and negligible increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

Barclay Apartments

As shown in **Table M-9**, the residences at The Hayden on Hunter Street would experience minimal levels of construction noise and modest increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

Asphalt Green Upper East Side Campus

As shown in **Table M-9**, the open space at Asphalt Green Upper East Side Campus at York Avenue and East 91st Street would experience minimal levels of construction noise and negligible increases in noise levels at times during the most noise-intensive construction activities. With the construction noise control measures described above, the maximum noise levels predicted to be generated by on-site construction activities at this receptor would not be expected to result in exceedances of the *CEQR Technical Manual* construction noise screening thresholds. These receptors would not have the potential to experience a significant adverse construction noise impact and are not discussed further.

Duration of Construction Noise from On-Site Sources

Holmes Towers 1

As described above, at various times throughout the construction of the proposed project, the Holmes Towers 1 residential tower would experience exceedances of the *CEQR Technical Manual* construction noise screening thresholds resulting from on-site construction noise. The maximum construction noise levels, expected to be in the high 70s dBA at the façade approximately 16 dBA greater than existing noise levels, would occur during the approximately 2 months of excavation

including rock removal. Additionally, three months of line drilling for foundation construction would result in noise levels in the low 70s dBA at the façade approximately 8 dBA greater than existing noise levels. While this receptor is immediately adjacent to the proposed construction work area and is predicted to experience noticeable and potentially intrusive levels of construction noise intermittently during excavation and foundation work, the duration of these noise levels would be limited to this short-term period of excavation and foundation work. Additionally, the maximum predicted construction noise levels refer to the nearest residential unit window to the excavation/foundation construction activity. At windows further away (i.e., windows at upper floors or windows facing in a direction other than towards the location of work at any given time), construction noise levels would be up to approximately 10 dBA lower. Since excavation and foundation work would progress around the project site during this 5-month period, the maximum predicted noise levels do not represent a constant condition throughout this time. At a distance of at least 100 feet from the building, noise levels would be approximately 5 to 10 dBA lower than the worst-case noise levels shown in this analysis. Therefore, the construction noise effects associated with the proposed project would be considered temporary and short term.

After the 5-month period of maximum noise levels as identified above, intermittent exceedances of the CEQR construction noise screening thresholds are predicted to occur at this receptor for an additional 11 months. During this time, noise levels resulting from construction would be in the high 60s dBA, resulting in noise level increases of up to approximately 5 dBA. While the estimated noise level increases at this receptor would be noticeable because of relatively low existing noise levels at these receptors, during times outside the 5-month period of maximum construction noise, the total noise levels would be in the range considered “marginally acceptable” according to *CEQR Technical Manual* noise exposure guidelines and typical for this neighborhood according to measured noise levels at other nearby locations (i.e., at-grade level along First Avenue, which the west side of this receptor faces).

Holmes Towers 2

As described above, at various times throughout the construction of the proposed project, the Holmes Towers 2 residential tower would experience exceedances of the *CEQR Technical Manual* construction noise screening thresholds resulting from on-site construction noise. The maximum construction noise levels, expected to be in the low 70s dBA at the façade approximately 10 dBA greater than existing noise levels, would occur during the approximately 2 months of excavation including rock removal. While this receptor is immediately adjacent to the proposed construction work area and is predicted to experience noticeable and potentially intrusive levels of construction noise intermittently during excavation work, the duration of these noise levels would be limited to this short-term period of excavation work. Additionally, the maximum predicted construction noise levels refer to the nearest residential unit window to the excavation/foundation construction activity. At windows further away (i.e., windows at upper floors or windows facing in a direction other than towards the location of work at any given time), construction noise levels would be up to approximately 10 dBA lower. Since excavation and foundation work would progress around the project site during this 5-month period, the maximum predicted noise levels do not represent a constant condition throughout this time. At a distance of at least 100 feet from the building, noise levels would be approximately 5 to 10 dBA lower than the worst-case noise levels shown in this analysis. Therefore, the construction noise effects associated with the proposed project would be considered temporary and short term.

Outside of the 2-month period of maximum noise levels as identified above, intermittent exceedances of the CEQR construction noise screening thresholds are predicted to occur at this receptor for an additional 13 months. During this time, noise levels resulting from construction

would be in the low 70s dBA, resulting in noise level increases of 4 to 6 dBA. While the estimated noise level increases at this receptor would be noticeable because of relatively low existing noise levels at these receptors, during times outside the 2-month period of maximum construction noise, the total noise levels would be in the range considered typical for this neighborhood according to measured noise levels at other nearby locations (i.e., at-grade level along First Avenue, which the west side of this receptor faces).

The East River Hotel

As described above, at various times throughout the construction of the proposed project, the East River Hotel on East 92nd Street would experience exceedances of the *CEQR Technical Manual* construction noise screening thresholds resulting from on-site construction noise. The maximum construction noise levels, expected to be in the low 70s dBA at the façade, would occur during the approximately 5 months of excavation and foundation construction. During the subsequent 11 months of superstructure construction, maximum construction noise levels at this receptor would be in the mid-60s dBA resulting in noise level increases that, while they would slightly exceed the *CEQR Technical Manual* construction noise screening thresholds, would be barely perceptible. For the remaining 12 months of construction of the proposed project, construction noise levels would not exceed the *CEQR Technical Manual* construction noise screening thresholds. While this receptor is across the street from the proposed construction work area and is predicted to experience exceedances of the CEQR construction noise screening thresholds intermittently throughout excavation and foundation work, the duration of the exceedances would be limited to this short-term period of excavation and foundation work. Therefore, the construction noise effects associated with the proposed project would be considered temporary and short term.

Determination of Construction Noise Impacts

Holmes Towers 1

Based on field observations, the Holmes Towers 1 residential tower appears to have insulated glass windows and an alternative means of ventilation (i.e., through-wall and through-window air conditioning units), which would be expected to provide approximately 25 dBA window/wall attenuation. Consequently, maximum interior $L_{10(1)}$ noise levels during worst-case excavation and foundation construction activity would be in the mid-50s dBA, and maximum interior $L_{10(1)}$ noise levels during other construction activities would range from the mid-30s to mid-40s dBA. Compared with the 45 dBA threshold recommended for residential use according to CEQR noise exposure guidelines, the estimated construction noise levels would be up to approximately 11 dBA greater at times during the approximately 2 months of excavation including rock removal, up to 3 dBA greater at times during the approximately 2 months of line drilling associated with foundation construction, and would be within the acceptable range during the remainder of construction. Furthermore, construction of the proposed project would occur during typical daytime hours, and would therefore typically not produce noise during nighttime hours when residents would be most sensitive to noise.

Because the maximum estimated levels of construction noise would occur for a relatively short period of time (i.e., 2 months), predicted interior noise levels would be no more than 3 to 11 dBA greater than the range considered acceptable for residential use according to CEQR criteria over the course of no longer than approximately four months, and during other portions of the construction period noise level increments would be within the acceptable range, noise resulting from construction of the proposed project would not rise to the level of a significant adverse impact at this receptor.

Holmes Towers 2

Based on field observations, the Holmes Towers 2 residential tower appears to have insulated glass windows and an alternative means of ventilation (i.e., through-wall and through-window air

conditioning units), which would be expected to provide approximately 25 dBA window/wall attenuation. Consequently, maximum interior $L_{10(1)}$ noise levels during worst-case excavation and foundation construction activity would be in the mid to high 40s dBA, and maximum interior $L_{10(1)}$ noise levels during other construction activities would range from the mid-30s to mid-40s dBA. Compared with the 45 dBA threshold recommended for residential use according to CEQR noise exposure guidelines, the estimated construction noise levels would be up to approximately 5 dBA greater at times during the approximately 2 months of excavation including rock removal, and would be within the acceptable range during the remainder of construction. Furthermore, construction of the proposed project would occur during typical daytime hours, and would therefore typically not produce noise during nighttime hours when residents would be most sensitive to noise.

Because the maximum estimated levels of construction noise would occur for a relatively short period of time (i.e., 2 months), predicted interior noise levels would be no more than 5 dBA greater than the range considered acceptable for residential use according to CEQR criteria, and during other portions of the construction period noise level increments would be within the acceptable range, noise resulting from construction of the proposed project would not rise to the level of a significant adverse impact at this receptor.

The East River Hotel

The East River Hotel was constructed in 2005. Based on field observations, the hotel guestrooms appear to have insulated glass windows. Furthermore, the DOB Mechanical Code applicable to the hotel at the time of its construction in 2005 would require the provision of mechanically ducted outside air to the hotel guestrooms, which would allow for the maintenance of a closed-window condition. Consequently, the maximum interior $L_{10(1)}$ noise levels during worst-case excavation and foundation construction activity would be in the low to high 40s dBA and maximum interior $L_{10(1)}$ noise levels during other construction activities would be in the mid- to high 30s dBA. Compared with the 45 dBA threshold recommended for hotel guestroom use according to CEQR noise exposure guidelines, the estimated construction noise levels would be up to approximately 4 dBA greater during the approximately 5 months of excavation and foundation construction, and would be within the acceptable range during the remainder of construction. Furthermore, construction of the proposed project would occur during typical daytime hours, and would therefore typically not produce noise during nighttime hours when hotel guests would be most sensitive to noise.

Because the maximum estimated levels of construction noise would occur for a relatively short period of time (i.e., 5 months), estimated interior noise levels would be no more than 4 dBA greater than the range considered acceptable for hotel guestroom use according to CEQR criteria, and during other portions of the construction period noise level increments would be within the acceptable range, noise resulting from construction of the proposed project would not rise to the level of a significant adverse impact at this receptor.

CONCLUSIONS

Construction of the proposed project would be expected to result in elevated noise levels at nearby receptors and noise due to construction would at times be noticeable and potentially intrusive. However, at receptors other than those directly adjacent to the project site, noise from construction would be intermittent and of limited duration, and estimated construction noise levels would not exceed *CEQR Technical Manual* construction noise screening thresholds. In addition, the project sponsor has committed to additional noise control measures beyond the minimum required by code in order to reduce potential noise effects on the surrounding receptors. Consequently, noise

associated with the construction of the proposed project would not rise to the level of a significant adverse noise impact at these receptors not directly adjacent to the northeast, northwest, and south.

At receptors immediately adjacent to the project site, construction of the proposed project would result in large noise level increases and high noise levels during the most noise-intensive construction activities at the adjacent work area. However, these noise levels would be intermittent and of limited duration based on the construction schedule. Consequently, the projected levels of noise resulting from construction of the proposed project at these receptors would not rise to the level of a significant adverse noise impact at these locations.

VIBRATION

Construction activities have the potential to result in vibration levels that may result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. Vibratory levels at a receiver are a function of the source strength (which is dependent upon the construction equipment and methods utilized), the distance between the equipment and the receiver, the characteristics of the transmitting medium, and the receiver building construction. Construction equipment operation causes ground vibrations which spread through the ground and decrease in strength with distance. Vehicular traffic, even in locations close to major roadways, typically does not result in perceptible vibration levels unless there are discontinuities in the roadway surface. With the exception of the case of fragile and possibly historically significant structures or buildings, construction activities generally do not reach the levels that can cause architectural or structural damage, but can achieve levels that may be perceptible and annoying in buildings very close to a construction site. An assessment has been prepared to quantify potential vibration impacts of construction activities on structures and residences near the project sites.

CONSTRUCTION VIBRATION CRITERIA

For purposes of assessing potential structural or architectural damage, the determination of a significant impact was based on the vibration impact criterion used by the New York City Landmarks Preservation Commission (LPC) of a peak particle velocity (PPV) of 0.50 inches/second as specified in the DOB TPPN #10/88. For non-fragile buildings, vibration levels below 2.0 inches/second would not be expected to result in any structural or architectural damage.

For purposes of evaluating potential annoyance or interference with vibration-sensitive activities, vibration levels greater than 65 vibration decibels (VdB) would have the potential to result in significant adverse impacts if they were to occur for a prolonged period of time.

ANALYSIS METHODOLOGY

Table M-10 shows vibration source levels for typical construction equipment.

Table M-10
Vibration Source Levels for Construction Equipment

Equipment	PPVref (in/sec)	Approximate Lv (ref) (VdB)
Vibratory Roller	0.210	94
Large bulldozer	0.089	87
Loaded trucks	0.076	86
Small bulldozer	0.003	58
Source: Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06, May 2006.		

The source vibration levels shown in **Table M-10** were projected to nearby receptors to estimate the levels of construction vibration that would occur in the study area.

CONSTRUCTION VIBRATION ANALYSIS RESULTS

The structures of most concern with regard to the potential for structural or architectural damage due to vibration are the Holmes Towers 1 and 2, Brittany Apartments, RiverEast, and the East River Hotel. However, as a result of these structures' distances from the construction site, vibration levels at these buildings and structures would not be expected to exceed 2.0 in/sec PPV, including during pile installation activities, which would be the most vibration intensive activity associated with construction of the proposed project. Additional receptors farther away from the project sites would experience even less vibration than those listed above, which would not be expected to cause structural or architectural damage.

In terms of potential vibration levels that would be perceptible and annoying, the equipment that would have the most potential for producing levels that exceed the 65 VdB limit is caisson drilling. It would have the potential to produce perceptible vibration levels (i.e., vibration levels exceeding 65 VdB) at receptor locations within a distance of approximately 135 feet depending on soil conditions. However, the operation would only occur for limited periods of time at a particular location and therefore would not result in any significant adverse impacts.

CONCLUSIONS

Because construction of the proposed project would not have the potential to result in vibration at a level that could result in architectural or structural damage to adjacent buildings and because construction would result in vibration at a level that would have the potential to be noticeable or annoying only for limited periods of time, there would be no significant adverse vibration impacts from the proposed project.

OTHER TECHNICAL AREAS

LAND USE AND NEIGHBORHOOD CHARACTER

According to the *CEQR Technical Manual*, a construction impact analysis for land use and neighborhood character is typically needed if construction would require continuous use of property for an extended duration, thereby having the potential to affect the nature of the land use and character of the neighborhood.

Land Use

Construction activities would affect land use on the project site, but would not affect land use conditions and patterns outside of this area. As is typical with construction projects, during periods of peak activity there would be some temporary effects to the nearby areas. There would be construction trucks and construction workers coming to the project site as well as trucks and other vehicles backing up, loading, and unloading. These activities would be temporary in nature and would have limited effects on land uses near the project site, particularly as most construction activities would take place within the project site and the portion of sidewalk on the north side of East 92nd Street immediately adjacent to the project site. Overall, the temporary and localized nature of construction would not result in any significant adverse impacts on local land use patterns of the nearby area.

Neighborhood Character

Construction activities would adhere to the provisions of the New York City Building Code and other applicable regulations. In addition, throughout the construction period, measures would be implemented to control noise, vibration, and air emissions including dust. Construction fences would be erected around the perimeter of the project site to reduce potentially undesirable views of construction areas, to buffer noise emitted from construction activities, and to protect the safety of pedestrians during construction. Access to surrounding residences including the adjacent Holmes Tower development would be maintained throughout the duration of the construction period. Overall, construction of the proposed project is not expected to result in significant adverse neighborhood character impacts in neighborhoods surrounding the project site.

SOCIOECONOMIC CONDITIONS

According to the *CEQR Technical Manual*, construction impacts to socioeconomic conditions are possible if the proposed project would entail construction of a long duration that could affect access to and thereby viability of a number of businesses, and if the failure of those businesses has the potential to affect neighborhood character. Construction of the proposed project would not affect the operations of any other nearby businesses or obstruct major thoroughfares used by customers or businesses. Construction would create direct benefits resulting from expenditures on labor, materials, and services, and indirect benefits created by expenditures by material suppliers, construction workers, and other employees involved in the construction activities. Construction also would contribute to increased tax revenues for the City and state, including those from personal income taxes and sales tax on construction materials. Construction activities associated with the proposed project would not result in any significant adverse impacts on socioeconomic conditions.

COMMUNITY FACILITIES

According to the *CEQR Technical Manual*, construction impacts to community facilities are possible if a community facility were directly affected by construction (e.g., if construction would disrupt services provided at the facility or close the facility temporarily, etc.). Construction workers would not place any burden on public schools and would have minimal, if any, demands on libraries, child care facilities, and health care in the surrounding area. Construction of the proposed project would not block or restrict access to any facilities in the area, and would not materially affect emergency response times. The existing NYCHA residential building adjacent to the project site within the Holmes Towers development contains ground floor community facility space. It is anticipated that access to and operation of this space would be maintained during construction of the proposed project and closures of this existing community facility use would not be required. Therefore, construction activities associated with the proposed project would not result in any significant adverse impacts on community facilities.

OPEN SPACE

According to the *CEQR Technical Manual*, construction impacts to open space are possible if the open space is taken out of service for a period of time during the construction process. There are no publicly owned open spaces on the project site. The project site contains two play areas serving the Holmes Towers development, which would be removed by construction of the proposed project, but these play areas would be replaced within the Holmes Towers development as part of the proposed project. Furthermore, the proposed project would construct three new play areas within the Holmes Towers development. The proposed project would also provide walkway and landscaping

improvements around and between the existing buildings, along with improved seating areas and lighting. Open spaces within NYCHA developments are typically for the use of NYCHA residents, are not open to the general public, and are not considered public open space for the purposes of CEQR analysis. While construction of the proposed project may cause temporary disruptions to the nearby open spaces, it is expected that such disruptions in any given area would be temporary and would not be ongoing for the full duration of the construction period. Measures would be implemented to control air emissions, dust, noise, and vibration on the project site during construction. Therefore, no significant adverse construction impacts are anticipated on open space.

HISTORIC AND CULTURAL RESOURCES

A detailed assessment of potential impacts on historic and cultural resources is described in Attachment G, “Historic and Cultural Resources.” The proposed project would not adversely impact archaeological resources, as LPC has determined that the project site has no archaeological significance. There are no known architectural resources identified in the study area. Therefore, construction of the proposed project would not have any significant adverse impacts on historic and cultural resources.

HAZARDOUS MATERIALS

A detailed assessment of potential impacts of hazardous materials is described in Attachment I, “Hazardous Materials.” The proposed project would entail construction of a new building requiring excavation and soil disturbance for foundations, utilities, etc. Although construction activities could increase pathways for human exposure to any contaminated materials present in the subsurface, impacts would be avoided by incorporating the following into the proposed project:

- Based on the results of the Phase II, a RAP and a CHASP have been prepared for the entire project site for DEP review. DEP approved the RAP and CHASP in a letter dated May 31, 2018 and these plans would be implemented during the subsurface disturbance associated with the proposed project. The purpose of a RAP and CHASP is to address the contamination identified by the Phase II and provide measures to address any contingencies that may arise during construction, such as specifying appropriate measures to be implemented if USTs, soil, or groundwater contamination, or other unforeseen environmental conditions are encountered. The RAP would also include any measures that need to be incorporated into the new construction, e.g. water/vapor proofing the foundations (the cellar is anticipated to extend to 12 feet below grade, i.e., well below the water table).
- Applicable regulatory requirements would also be followed at the project site, e.g., in removal of the play equipment that could include lead-based paint; disposing of any excess soil off-site at appropriately licensed facilities; reporting to NYSDEC any signs of a petroleum spill (and removing and registering encountered tanks); and following DEP requirements during dewatering.

Construction in accordance with the DEP-approved RAP/CHASP and completion of a Professional Engineer-certified Remedial Closure Report at the conclusion of construction (for DEP approval) would be required through the Development Agreement between NYCHA and the Project Sponsor. The Development Agreement will comply with the RAP/CHASP. The Project Sponsor submitted an application to NYSDEC in June 2018 to investigate and remediate the building footprint portion of the project site under the New York State Brownfield Cleanup Program (BCP). As part of the BCP (a voluntary program), all remedial activities within the BCP boundary would fall under the requirements of a NYSDEC-approved Remedial Action Work Plan (RAWP) approved through issuance of a Decision Document, and all other applicable NYSDEC

requirements. This would include similar procedures and measures as the DEP RAP/CHASP. Work outside of the proposed building footprint would be conducted under the DEP RAP. Absent enrollment in the BCP and for the portion of the project site outside the BCP boundary, the local approvals obtained through DEP would apply during soil excavation and disturbance activities conducted throughout the project site.

With these remedial measures included as part of the proposed project, no significant adverse impacts related to hazardous materials would occur. *